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CURRENT UNEMPLOYMENT STATISTICS OF THE CENSUS BUREAU AND SOME ALTERNATIVES

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BUREAU OF THE CENSUS

1. Introduction

IN THE recent technical discussion of the measurement of unemployment most of the emphasis has been on statistical problems—the adequacy of the collection of the official statistics and the reasonableness of the concepts and definitions used. It is my intention in this paper to examine these questions as they relate to the Census Bureau data. First, however, a brief review of the general problem of concepts might serve as a useful introduction.

What are the criteria for selecting an unemployment concept? Presumably, an economist would ask for a measurement of unemployment in his terms, that is, the surplus or unused supply of labor under current market conditions. A statistician, given the assignment of providing data to measure this unused supply, has many decisions to make. For example, should he count the number of persons who want but cannot find jobs or only the number who have lost jobs because of declining business activity? What shall be the tests of inability to find jobs? Should unemployment be measured by man-hours lost instead of by number of persons out of work? Should partial employment, in terms of hours, or underemployment, in terms of income in relation to skill, be included in the measure? Does unemployment exist when a worker is assigned below his maximum skill level or when his service is wasted because of inefficient methods of production?

It does not seem possible to select a concept of unemployment in a vacuum. The choice must be made with some knowledge of the uses of the resulting measurement and the methods of deriving it. In the past, the issue has usually been settled, not by the economist in the light of his own analytical needs, but by those who have the job of advising policy makers. For example, the concept of unemployment used by the Census Bureau gives a measure of the number of job applicants—persons without work and seeking new jobs. This concept had its origin in a period of mass unemployment when public policy was

Note: The opinions expressed in this paper are those of the author and do not necessarily reflect the position of the Census Bureau.

STATISTICS OF CENSUS BUREAU

directed toward providing work relief for employable persons who were in need and out of work. A count of all jobless persons seeking employment would obviously provide an upper limit for such a program.

At the present time, public policy needs are less clear cut. It is true that the statistics on total unemployment are examined when the unemployment compensation system is being evaluated but there is no legal or automatic, administrative tie-up. To a large extent, the total unemployment figures today are used as an economic indicator or as a signal of distress to warn that consumer income and standards of living may be falling in certain segments of the population.

For such uses, the figures on unemployment should be derived objectively and should reflect quickly and accurately the results of changes in economic activity that affect demands for manpower. They should also mirror changes in the demand for jobs associated with labor-force expansion or contraction. It should be possible, in addition, to distinguish various types of unemployment within the total, according to severity of impact on the family or individual, occupational and industrial characteristics, and other qualitative factors. (Most of these requirements point to a count of persons, rather than to man-hours lost, or some other derived measure.) The present concept used by the Census Bureau meets some but not all of these needs. The criticisms that have been advanced and some of the alternatives suggested will be discussed later in this paper.

Finally, it should be emphasized that the formulation of a satisfactory concept must take into account the method of measurement as well as the uses of the measurement itself. Because of the peculiar characteristics of the state of being unemployed, however defined, the problem of measurement takes on great importance in any realistic discussion of concepts. Therefore, it has seemed desirable to summarize here the experience with measuring the Census concept in order that the concept itself, as well as the alternatives, may be properly evaluated.

2. The Census Concept of Unemployment

According to the Census Bureau, the number of unemployed workers means the number of persons who did no work at all for pay or profit or in a family enterprise during a specified calendar week but who were reported as looking for work. In addition to the active work seekers (including those waiting to hear the results of some job-seeking activity made during the last sixty days) certain "inactive" groups are also included, in recognition of some of the special conditions of the labor market. These are persons who would have been looking for work

STATISTICS OF CENSUS BUREAU

except that they were temporarily ill, they were waiting to be called back to a job from which they had been laid off on an indefinite basis, or they believed no work was available in their line of work or in the community.

DEVELOPMENT OF CONCEPT

The history of the development of this concept is by now familiar. Briefly, the depression of the thirties gave rise to an urgent need for an administratively useful measure of unemployment. It also stimulated a recurring, bitter controversy over the appropriate methods of definition and classification. Then, as now, political attitudes and economic interests colored the popular discussions and may even have affected somewhat the technical work. Efforts to measure the number of employables out of work, the number able and willing to work, or the number for whom jobs should be provided, all came close to foundering on the rocks of controversy over techniques and definitions. Toward the end of the decade, various experiments pointed to a middle-of-the-road solution—that is, a current activity test. Thus, if a person has no job but is currently making an active search for work, it could be agreed that he is unemployed.

In a period of long-term unemployment, however, “current activity” seemed an unnecessarily restrictive test for a person who had unsuccessfully searched for work in his occupation for many months, or who had lived in a depressed one-industry town where common knowledge of the job market made it abundantly clear that there were no jobs available. Similarly, persons who thought they would be called back to their old jobs after a layoff might be expected not to seek other jobs actively in the interim. Again, persons whose search for work was interrupted by temporary illness should, nevertheless, be included in the count of the unemployed.

Accordingly, three types of “inactive” work seekers were added to the pure group of “active” unemployed (along with those on emergency work programs) and the combined total came to be generally accepted as a good measure of the jobless.

It appears now that the acceptability of this concept was largely based on pragmatic, not logical or analytical, considerations. The Works Progress Administration had given impetus to much of the experimental work in its surveys of unemployment. In that research, and developing from the Enumerative Check of the 1937 Census of Unemployment, the use of a set of direct interviews with samples of the population had come to be considered the most economical, comprehensive means of measurement. Generally, these surveys had to be

STATISTICS OF CENSUS BUREAU

conducted by only moderately well trained interviewers, recruited on an *ad hoc* basis and unlikely to be able to classify individuals correctly on the basis of complex responses. It was believed, however, that they could adequately record the answers to a few simple, direct questions, which could be designed to elicit objective information. In other words, the concept was useful because it was measurable. So far as anyone knew at that date, the measurement of this concept was almost entirely objective, and would, therefore, produce "unbiased" results, regardless of operating conditions.

This operational definition, as is well known, was used in the 1940 Census of Population and in the Monthly Report on Unemployment, the monthly sample survey of the population inaugurated in 1940 by the Works Progress Administration. That survey, which was transferred to the Census Bureau in August 1942, and rechristened the Monthly Report on the Labor Force and later the Current Population Survey, has been the source of the estimates of total unemployment for more than fourteen years. Throughout these years, the definition of unemployment has remained unchanged, although methods of measurement have altered somewhat. From time to time, as we shall see, doubts have been cast on both the concept and the measurement, and both are under official review again at this time.

MEANING OF CONCEPT

Starting with an operational definition of unemployment, can we find any theoretical justification for its use? What are we measuring? It has been said that unemployment as currently defined represents the number of people without jobs who are exerting some pressure on the free labor market for jobs.¹ Is this equivalent to the unused supply of labor under current demand conditions?

At some points, changes in the number of persons looking for work have no relation to the demand for workers and the level of employment, except perhaps in a remote sense. For example, the end of the school year in June brings into the unemployed group thousands of temporary vacation workers and persons beginning their working life who would not be in the labor force under a different school calendar. The traditional availability of such workers may affect staffing patterns of industries with summer peaks (agriculture, construction, forestry, recreation and service industries, etc.), but the initial impetus for the expansion of unemployment at the beginning of the summer and its contraction at the end of the summer, is from the supply side.

¹ Charles Stewart, unpublished memorandum, Interagency Committee on Labor Supply, Employment and Unemployment Statistics, Bureau of the Budget, February 4, 1945.

STATISTICS OF CENSUS BUREAU

Again, the number of people looking for work during a given calendar week must be very wide of the mark in measuring unused labor supply, if, as we have seen, thousands of potential workers can be recruited from outside the labor force into jobs without seeking work for any substantial period. Each month during 1951 and 1952, an average of almost 3 million people were found to be employed who had not been seeking work as recently as the month before; some had looked for work between the two survey dates but many had gone straight into jobs. Conversely, millions moved from employment to some activity outside the labor force, without looking for other jobs in the meantime. Supply, therefore, must have to be defined and measured by some other indicator.

Perhaps then the best that can be claimed for the present concept of unemployment is that it furnishes a rough guide to the short-term immediate demand for new jobs, or conversely, measures the immediate (one-week's) supply of workers with no present job attachment. Its utility may be less as a tool of economic analysis and more as an index of short-run dislocation of manpower or of the volume of available manpower that has no present job connection.

As a prelude to a better understanding of the Census figures, let us examine what is included in this totality of persons labeled "unemployed." In that classification might be found any of the types of persons listed below if they were reported as looking for work, actively or inactively (the list, although not exhaustive, covers most of the different major groups):

1. Persons who have lost jobs in industry or business because of economic factors beyond their control
2. Persons who are temporarily unable to work at their jobs because of labor disputes in other industries or because of interruptions to production due to natural disasters, breakdowns, etc.
3. Persons who have been fired from their jobs for personal reasons
4. Persons who have quit their jobs to try to improve their economic status
5. Persons who have quit their jobs from dissatisfaction for a variety of reasons; floaters
6. Persons who have retired voluntarily or involuntarily from their jobs because of old age but who still prefer to work
7. Persons looking for their first job after leaving school or college
8. Persons looking for part-time or temporary jobs to earn pin money
9. Persons entering (or re-entering) the labor market to supplement

STATISTICS OF CENSUS BUREAU

- the earnings of the chief wage earner in the family or to substitute for him in times of illness, depression, etc.
10. Recently discharged military personnel seeking civilian jobs
 11. Persons who are actually unable to work, but who nevertheless try to find employment
 12. Seasonal workers re-entering the labor market at the opening of the period of seasonal activity
 13. Seasonal workers who could not be placed in their community during the off season and whose unemployment reflects either climatic or business conditions

On the other hand, the label "unemployed" as developed from this concept does not, and cannot under present interpretations, include any of the following, who might well be considered "unemployed" for some purposes:

1. Partially employed, working at their regular jobs but at reduced hours because of economic difficulties
2. Underemployed, working below grade or below usual wage level because of layoffs from regular jobs
3. Self-employed, working full time but at marginal types of work that provide less than a minimum standard of living for themselves and their families
4. Unpaid workers who help in the family enterprise on a full-time basis because they cannot find paid jobs
5. Persons who have become discouraged in their search for work and indicate no current interest in employment
6. Persons with needed skills who are not free to take a job or not interested in the going wage rates but who, for some purposes, such as mobilization, might be considered part of the labor supply and unemployed
7. Persons whose search for work is limited to "signing for unemployment compensation checks"
8. Seasonal workers in the off season who do not seek other jobs
9. Other persons not working at their jobs or businesses for a variety of reasons but not seeking new jobs

In summary, then, the present concept of unemployment yields a measurement of the number of job applicants, regardless of reason for seeking work. It does not yield a clear-cut measurement of the effects of production cutbacks, or frictions or dislocations in the economic system, because it excludes the underemployed and includes voluntary job shifting and other labor force movement. Even less is the concept a measure of wasted manpower or of need for income, since it takes no

STATISTICS OF CENSUS BUREAU

account of earnings, skill utilization, or living standards among the employed.

3. *Experience with Measurement of Unemployment*

Up to this point, the discussion of the present concept of unemployment has been presented without reference to the method of measurement. The current procedures could undoubtedly be adapted to measure many other concepts, but the survey method itself has certain kinds of limitations that we do not yet know how to remove.

In summarizing here some of the accumulated information on the problems that have arisen in the measurement of the concept of unemployment, my purpose, as indicated earlier, is to provide background for the final assessment of the unemployment measurement furnished by the Census statistics. It is necessary, in this process, to point out weaknesses and areas of inaccuracy. But in compensation for these and the other controversial features of the data, there is a flexibility in the population survey technique, as well as a rich variety of results for analysis, that does not exist in measurements arising from administrative statistics. Some of these compensating features will be discussed in Section 4.

MEASUREMENT PROCEDURE

To summarize briefly the current Census Bureau procedures for measuring unemployment: Each month, a group of part-time interviewers calls upon a sample of approximately 25,000 addresses, to ask questions of all resident persons fourteen years of age and over regarding their activity during the preceding week, the week containing the eighth of the month. These addresses are selected from maps, lists, etc. of living quarters located in 230 sample areas.² The sample is a probability sample—that is, each dwelling unit has a known probability of coming into the sample—and the sampling errors can be computed from the sample itself. Each household is interviewed for a period of four months, dropped from the sample for eight months, and interviewed again for a second four-month period. One-eighth of the sample each month is completely new, one-eighth returning for its second four-month period.

Relatively few questions are asked each month to determine employment status. (The personal characteristics of each member of the household at the sample address are recorded the first month the

² For up-to-date description of the sample and estimation procedure, see "Concepts and Methods Used in the Current Labor Force Statistics Prepared by the Bureau of the Census," *Current Population Reports*, Series P-23, No. 2, July 30, 1954.

STATISTICS OF CENSUS BUREAU

household is interviewed and are transcribed to the schedule which is sent to Washington each month. As persons leave or are added to the households in the sample dwelling units, reports for them are eliminated or added. Age and marital status are kept up-to-date for persons remaining in the sample households.) The employment status questions currently in use consist of a series of sorter questions, as follows:

1. What was this person doing most of last week, working, keeping house (or going to school) or something else? For all persons reporting some status other than working or being unable to work because of long-term illness or disability, the next three questions apply:
2. Did this person do any work at all last week, not counting work around the house?
3. If NO in 2: Was he looking for work?
4. If NO in 3: Even though he didn't work last week, does he have a job or business from which he was temporarily absent? If YES, reason for absence is entered in a pre-coded box: illness, vacation, labor dispute, bad weather, layoff with definite instructions to return in thirty days of layoff, waiting to start new job or business in thirty days, and all other.

Persons reported as working in questions 1 or 2 are asked the number of hours they worked during the week, and occupation, industry, and class of worker of job (private wage or salary worker, government worker, own account, or unpaid family worker). Occupation, industry, and class of worker are also reported for persons with a job but not at work and not looking for work. These two constitute the employed.

Persons reported as not working but looking for work are asked the number of weeks they have been looking for work, and the occupation, industry, and class of worker of their last full-time job of two weeks or more.

These actual questions are by design as simple and brief as possible, in order to permit a speedy, inexpensive interview and to avoid imposing too much on the respondent, who, it is hoped will be a cooperative and voluntary member of the survey panel for eight interviews. The instructions to the interviewers on concepts and definitions are contained in a detailed manual together with instructions for all the other phases of the survey. The questions as worded are generally understood and appear to obtain correct answers in the vast majority of cases; for respondents who do not understand or who raise questions, the interviewer is supposed to be familiar with the detailed

STATISTICS OF CENSUS BUREAU

definitions and able to probe and interpret the facts related to him so that he can correctly classify the respondent, or bring the problem to the attention of his supervisor.

EXPERIENCE WITH MEASUREMENT OF CERTAIN PROBLEM GROUPS

Marginal cases have always presented problems in the measurement of unemployment by direct surveys as well as in the determination of unemployment for benefit purposes. For the first five years of the operation of the Census sample survey, separate identification was made of persons actively seeking work, and of the three types of inactive unemployed: those on indefinite layoff, those not seeking work because of temporary illness or the belief that no work was available in their line of work or in the community. Until the termination of the work relief programs in 1943, persons on work relief were also counted among the unemployed. Identification was accomplished by specifying that all persons not at work on a regular or government job and not actively seeking work were to be asked the reason they were not seeking work. Codes were supplied the interviewers for labeling the inactive unemployed and the persons on work relief.

The distribution of the total unemployed into the specified categories is shown in Table A-1 for the years during which these identifications were made. It will be seen that most categories of unemployed workers decreased rapidly with the defense and war production programs. The number of active work seekers dropped continually except for a seasonal pickup in the summer months when students came into the labor market. The "inactive" groups, except those not looking for work because of illness, showed a higher rate of decline than did the work seekers through 1943. In the last two years of the war, the figures reflecting layoffs began to show a moderate rise, which may, in fact, have occurred, although the sampling error on such numbers does not permit a firm conclusion. The relative stability in the number of persons not actively seeking work because of temporary illness arouses some suspicion about the meaning of this category. Certainly it would not be expected to approach the number of able-bodied, active work seekers, as it does some months. Rather, in a period of labor shortage and rising family incomes, it is likely that persons too ill to look for a job would have actually been able to withdraw from the labor force.

As experience with the survey accumulated, it began to appear that there was some failure to obtain a full count of persons in the labor force, particularly the employed sector. Supplementary questions directed toward persons classified as not in the labor force had the effect of increasing the count of the labor force temporarily. It was believed that interviewers had been ignoring the specified questions

STATISTICS OF CENSUS BUREAU

for persons they assumed to be nonworkers. These experiences led to further experimentation with question wording and to the adoption in July 1945 of a set of questions substantially like those in current use. Although conclusive proof could never be adduced, it was generally believed that the question on reason for not looking for work month after month had had two unfortunate results: (1) interviewers began to assume the answers to this and other questions in order to avoid irritation of the respondent and (2) there was a tendency on the part of some respondents to rationalize their inactivity when asked why they were not looking for work by saying they were ill, particularly in a period of wartime manpower shortages. Accordingly, the revised schedule eliminated the question on the reason for not looking for work, but the concept of unemployment remained the same. The interviewers were instructed to classify as among those "looking for work" anyone who on the basis of information furnished, appeared to meet the definition of inactive unemployed.

There has always remained some uneasiness about this method of handling the problem, and if unemployment had become a serious problem in the postwar period, it is hoped that some better method would have been devised.

RELIABILITY OF MEASUREMENT

Sources of Error. It should be obvious even from this drastically condensed description of the survey that the procedures currently used cannot produce highly refined, precise results. Although the series of Census Bureau publications presenting the data have been heavy with cautions about the possibilities of various types of errors, there is a surprising number of users, both technical and nontechnical, who have ignored these cautions. Let me restate them:

1. All estimates from the sample are subject to sampling variability, which may be large on the smaller numbers. With unemployment at about the 3 million level, the chances are one in three that sampling error may be as high as 4 per cent; in one case out of twenty, the sampling error may be as high as 8 per cent. At the 3 million level, if the sample estimates show unemployment at 5 per cent of the labor force, the chances are one in three that the sampling error could be as high as 0.19 percentage points. In other words, the chances are about two out of three that the rate based on a complete count would fall within the range of 4.81 and 5.19 per cent, and nineteen out of twenty that it would fall within the range of 4.62 and 5.38 per cent. Estimates of the amount of change in unemployment from one month to the next have a somewhat smaller error because 75 per cent of the households in the sample are identical between two successive months. The

STATISTICS OF CENSUS BUREAU

current estimation procedure, introduced in February 1954, was developed to take advantage of this fact.³

2. Another type of error arises not because of sampling but because of the enumerative process. These errors have their source in the lack of precise knowledge on the part of the respondent about the activities of other members of the household; lack of understanding of the questions; failure of interviewers to ask the questions properly or to interpret the answers correctly. In short, a second interview by another person or even by the same person would not always produce the same answers. This type of error tends to be larger in the case of unemployment than in the case of some other employment status categories, as will be discussed later. Despite years of census and survey experience, little is known about how to control these errors, within reasonable bounds of cost.

3. The processes of listing the land areas from which the sample dwelling units are drawn, selecting the sample, identifying all the individuals associated with those sample dwelling units, and completing all interviews may give rise to errors. A systematic check of completeness of coverage has shown that interviewers miss about 1.3 per cent of the population because of failure to list completely all living quarters in the designated areas and miss another 0.5 per cent in the quarters they visit. Failure to make contacts in occupied dwelling units by the end of the survey period averages about 3 to 5 per cent of the total occupied sample units a month. Adjustments for these errors are made in the final step of the estimation procedure, when the sample results are weighted up to independent estimates of the population by age, sex, and color, based on projections of the latest Decennial Census counts.

4. Errors can arise in the coding, editing, and tabulating of the survey results. These are fairly easy to control and have never proved to be serious.

5. Errors arise also, not from the sampling process or from imperfect performance of other activities, but from the difficulties of applying definitions. As in all fields of human behavior, there are situations in which a clear-cut classification cannot be made. These borderline cases are particularly troublesome in the interpretation of the present unemployment concept and give rise at least to instability in the results, if not error. An example is the case of a fisherman who works on shares nine months of the year and does no other work during the remaining three months because no other work exists in his area. Is he to be classified as unemployed or not in the labor force during the off season? His traditional labor force pattern is nine months of work and three

³ *Ibid.*, p. 6.

STATISTICS OF CENSUS BUREAU

months of inactivity. If other work were to be had in the off season, he might attempt to find it, but under conditions that he knows, he would say that he was not looking for work. Has he been "laid off" from his job? Or is he in the category of inactive unemployed who would be looking for work except that he believes no work is available in his line or in the community?

The case of the fisherman, if put to a vote of the major users of the data, would probably result in a classification of seasonally unemployed. Assume, however, that the marginal case is that of a housewife who works in the local vegetable cannery as long as there are any products to be processed. The canning season is considerably shorter than the fishing season, in this case. When the season is over, she can find no other work in the community, and becomes a full-time housewife again. Has she left the labor force or is she unemployed for the rest of the year? Or, consider the familiar case of the housewife who takes a temporary job in a department store before Christmas to earn money for the family gifts. If, after Christmas, she leaves her name with the employment office of the store to be called for a part-time job, does this constitute looking for work, even though she takes no other steps to find a job? Does this action justify her inclusion among the unemployed in later months—February, March, etc.? Questions of this kind have plagued the operators of labor force surveys everywhere because of the areas of vagueness in the concepts.

Measurement of Error. The labor force concepts introduced in 1940 with the Census of Population and the Monthly Unemployment Survey were hailed as a great advance in objectivity and measurability. Moreover, it was thought that the Decennial Census count of employment and unemployment could serve to evaluate the sample survey data and that if the sample estimates were sufficiently close to the truth, the survey would become a satisfactory vehicle for intercensal estimates. Complete count data would provide the true levels.

When the preliminary sample data from the Decennial Census became available, the comparisons with the as yet unpublished estimates from the WPA forty-one-county sample were made. Unexpectedly, the survey estimate of unemployment was higher than the Census count, and apparently closer to the truth (Table A-2). Partial evidence of this was adduced from comparisons of the figures on emergency workers with official figures.⁴ At a later date, when the early sample estimates

⁴ An interagency group spent considerable time analyzing the differences between the two sets of estimates and examining the procedures of the WPA survey. Census data for the forty-one counties in the WPA sample were weighted up to national estimates, using the WPA weighting scheme, in order to determine whether the differences were due to the estimation procedure. This test gave substantially the same count of unemployment as did the Census 5 per cent sample. A matching

STATISTICS OF CENSUS BUREAU

were revised to bring them into line with the estimates from the sixty-eight-area sample introduced by the Census Bureau in 1943, they were tied to a Census bench mark, but the Census figures used were those adjusted for misclassification of emergency workers and other defects.

The notion that a figure derived from a sample survey could be more nearly correct than a complete count received confirmation again in the 1950 Census comparisons. The Census count of employment was 5 per cent below the survey estimate and the count of unemployment 20 per cent below (Table A-3). With a greater degree of sophistication ten years later, advance plans had been made for a detailed investigation of probable Census-survey differences. The Census reports for the current survey sample households were matched with the survey reports. In addition, a second sample of households was drawn in the sixty-eight Current Population Survey areas which had not previously been included in the monthly survey, and these were interviewed independently by survey enumerators after the Census schedule had been filled, in order to examine differences for respondents who had not been previously "conditioned" by the survey interviews. An elaborate check was also made of the coverage of households and population in the sample survey. Final analysis, taking into account both response and coverage differences, is incomplete, but some conclusions can be drawn by examining the data for persons interviewed in both the 1950 Census and the CPS.

Briefly, these data show that the survey interviewers, who had more training and experience than the temporary Census enumerators, seemed to do a somewhat more careful job of asking the employment status questions, although this was not always true. Survey experience has generally shown that a higher count of the labor force reflects better interviewing, since more detailed questioning is required to uncover marginal and occasional workers. Comparisons of the two reports for the unemployed sector are difficult to interpret because the Census enumeration extended over a longer period and did not always refer to the same week. For a characteristic as volatile as unemployment, the time reference difference may be serious. However, when the data are examined for persons interviewed for the same calendar

study of WPA and Census returns for the same persons was proposed but apparently never completed. It is amusing to read the record of these discussions in the light of subsequent history. At that date, the Census Bureau representatives disagreed with the position that differences in enumerator performance were responsible for the different results, and they strongly opposed any public statement to that effect. For contrast, see the text of any report of the 1950 Census of Population and Housing.

STATISTICS OF CENSUS BUREAU

week, the differences are larger, not smaller, in the case of unemployment and agricultural employment; the estimates based on the reports of the Census enumeration of the matched cases are 24 per cent lower for unemployment and 16 per cent lower for agricultural employment (Table A-4). (Agricultural employment was rising seasonally during April and the later enumerations had the effect of raising the Census level, making it appear closer to the original CPS level than was actually the case.) The relative differences in the estimates of unemployment were equally great for men and women; for employed persons, the two results were much closer for men than for women (2.1 per cent versus 7.5 per cent).

Gross differences as well as net differences are shown in Table A-5, for the unemployed. Even for persons enumerated at the same date, the matched returns indicate that the two sets of enumerators classified differently in more than half of the cases. The CPS interviewers appeared to have been somewhat more conscientious in asking the probing questions, although there was some failure on their part too. To what extent the difference in results was due to inadequate performance by the interviewers, to incomplete information supplied by the householder, or to vagueness of concept, cannot, of course, be determined from these data.

It seems to me, as a result of these experiences in 1940 and 1950, that it is clear now that the "true" level of unemployment as currently defined cannot be measured by a complete census. There is even some question—and this must be resolved before too long—as to whether the labor force concepts are suitable at all for a population census taken under the conditions that are customary in the United States.

It may be noted that the differences between the survey estimates and the Decennial Census data were considerably larger in 1950 than in 1940. It may be that Census enumerators were more skilled in 1940 than in 1950, or that the survey enumerators were less skilled in 1940 than in 1950. Sampling errors cannot be computed for the WPA sample. The comparison for the two dates, however, indicates that even when unemployment is widespread, there is much greater variability in its measurement under the present concept than is the case for the measurement of employment.

Is there any other method of arriving at the "true" level of unemployment against which to measure the reliability of any particular figure? Do the data from the unemployment insurance system more nearly approximate the truth than do the complete census data? The insured unemployment data differ so much in concept and method of compilation from the current Census estimates, as Parnes has carefully shown

STATISTICS OF CENSUS BUREAU

in his paper, that it is almost astonishing to find the two series moving together at any given point in time. No method so far devised has been found to make the two series comparable, except on an extremely rough basis. The legal eligibility for benefits of persons reported as looking for work to the Census interviewers cannot be determined with any reliability in the regular interview process. Conversely, the insurance system by its very nature will obtain a report on availability for work from a person seeking to establish eligibility for payment that is bound to differ on occasion from what would have been reported to a survey interviewer.

Thus, although there must be areas of agreement in the two measurements, and, in fact, they do tend to move together at critical turning points, the statistics arising from the operation of the insurance system do not appear to offer real possibility for establishing "truth" for any part of the Census count.

Evidence of this was furnished directly after the end of World War II when the Census figures on the unemployment of women and World War II veterans fell below the figures on claims and veterans readjustment allowances for some period of time. Research conducted jointly by the Census Bureau and the United States Employment Service and the State Employment Security offices in a number of areas in 1946 showed that a considerable proportion of persons claiming benefits did not report themselves to Census interviewers as looking for work. During that postwar period, many women were in the process of leaving the labor force and many veterans were in a transition stage between military service and civilian employment. Thus, although they were registered as available for placement with a public employment agency, and met the requirements for eligibility for benefits, they did not report themselves to the Census interviewers as actively seeking jobs, even though many of the women probably would have gone back to their war jobs. These findings caused concern but they did serve to emphasize the difference between the two concepts. Whether or not there should be a difference between the two is one of the problems being currently considered. From some points of view, it is reassuring that the American public, apparently, did not regard "the Government" as a monolithic power with whose various representatives it was necessary to act and talk with a high degree of circumspection and consistency at all times.

In the absence of acceptable, independent measurements of the "true" level of unemployment, some work has been done to try to determine from the survey itself what the errors of response might be. This work has consisted of special, supplementary inquiries to attempt a measurement of the possible number of unemployed according to

STATISTICS OF CENSUS BUREAU

the present concept who were not being revealed by the more limited regular questions.⁵

These studies were conducted in August 1946, May and June 1947, February and June 1948, May 1949, January and June 1950. They fell into two groups. The first approached the problem of checking the unemployed classification by seeking to identify recent labor force members who perhaps would have been classified as unemployed if appropriate additional questions had been asked to determine why they were not looking for work—a modification of the procedures used from 1940 to 1945. There was some evidence that further questioning on reasons for not looking for work had the effect of encouraging types of responses that suggested attachment to the labor force. The more questions asked, apparently, the more likely the respondent was to furnish affirmative answers, perhaps because it was thought such answers were desired by the government, perhaps because the added questions actually clarified the respondent's thinking. A second group of surveys experimented with the approach of asking persons not in the labor force who had recently looked for work whether they still wanted work and could have accepted jobs at the time of the survey. Most of the results of these surveys have been published, but for convenience, the major findings are summarized in Tables A-6 and A-7.

In all these experiments except the first, in August 1946, the additional questions were asked at the time of the original interview and were therefore limited in number and scope. Throughout the program of experimentation, a major objective was to find a simple device for modifying the "current activity" test, so that it would be possible to count persons who are on the "fringe" of the current labor force and really applicants for job openings but who are not caught by the regular questioning process. In order not to jettison altogether the current activity test for identifying job applicants, it seemed important to include just those whose search for work might be assumed to be only briefly interrupted. Unfortunately for the cause of statistical measurement, the sharp reduction in unemployment after mid-1950 removed the pressure for further work on this problem, at the time when funds for this type of research became seriously limited.

Clearly the method of questioning had some bearing on the number of "fringe" unemployed who were sorted out of the group originally reported as not in the labor force. In the August 1946 survey, the probing questions were directed to the very large group who had been in

⁵ In two surveys, an attempt was also made to discover whether there were any persistent errors in the other direction, i.e. persons classified as unemployed who in fact were not really looking for work. Very few persons (under 100,000) were found among the unemployed who could not report some form of job seeking that met the definition.

STATISTICS OF CENSUS BUREAU

the labor force at some time during the past year (or who were World War II veterans) but who were not in the labor force at the time the questions were asked—some 7.7 million (Table A-6). This time period included the months of cutbacks in war production and the demobilization period when the extra workers recruited for war demands were leaving the labor force, some voluntarily and some not. Many would have continued happily to work at their old jobs and rates of pay had this been possible. Hence it is not surprising that a large number (about 400,000) reported that the reason for not seeking work was the belief that none was available.

In more normal times, perhaps close to the maximum possible number of potential work seekers is elicited by the question "Does this person want a job?" In June 1947, about 2.9 million persons outside the labor force were reported as wanting a job; this compares with 2.6 million unemployed reported for that date. When the further question was asked on why those desiring jobs had not looked for work, about four-fifths gave reasons that indicated they were not available to take work or had very little enthusiasm for job-seeking. This proportion would probably have increased further if some test had been applied such as intentions of seeking work in the near future.

The next five surveys, conducted in the period 1948-1950 used almost identical questions, starting with a sorter question to separate recent work seekers from the rest of the nonworkers, using a period of a month prior to the survey week as the time period. "Current activity" was thus modified from a week to several weeks. Persons who as recently as this looked for work were asked if they still wanted and could take a job. This simple, two-stage test combining both activity and attitude appears to have given fairly consistent results, judging by the limited observations available (Table A-7).

All the studies from 1946 on demonstrated that the marginal, or fringe, unemployed are preponderantly women and young workers, groups with alternative activities in the form of keeping house or going to school which impel them to move into and out of the labor force from time to time or to which they return on a full-time basis when the job situation deteriorates. On the average, one-half of these fringe workers were women eighteen years old or over and one-quarter were youngsters under eighteen years of age, some of whom had never worked before.

Changes in the number of fringe workers during the period surveyed seem to have been determined more by the factors that affect seasonal labor force activity than by general business conditions, but the evidence is inconclusive. Table 1 shows total unemployment and the estimates of fringe workers, by sex, for available months. The data for

STATISTICS OF CENSUS BUREAU

TABLE 1

Comparison of Total Unemployed as Reported and Number of Fringe
Unemployed According to Special Surveys, by Sex,
Selected Dates, 1946-1950
(thousands of persons, 14 years old and over)

MONTH AND YEAR	BOTH SEXES			MALE			FEMALE		
	Unem- ployed (1)	Fringe Work- ers (2)	Ratio of (2) to (1) (3)	Unem- ployed (4)	Fringe Work- ers (5)	Ratio of (5) to (4) (6)	Unem- ployed (7)	Fringe Work- ers (8)	Ratio of (8) to (7) (9)
August 1946 ^a	2,060	1,500	72.8	1,600	358	22.4	460	1,142	248.3
May 1947	1,960	220	11.2	1,420	94	6.6	540	126	23.3
June 1947	2,555	563	22.0	1,707	212	12.4	848	351	41.4
February 1948	2,639	494	18.7	1,889	147	7.8	750	347	46.3
June 1948	2,184	386	17.7	1,375	122	8.9	809	264	32.6
May 1949	3,289	525	16.0	2,366	165	7.0	923	360	39.0
January 1950	4,480	667	14.9	3,262	215	6.6	1,218	452	37.1
June 1950	3,384	720	21.3	2,200	308	14.0	1,184	412	34.8

^a Not comparable with later data.

August 1946 are included, although they were based on procedures entirely dissimilar to those for other months and cannot be considered comparable.

The estimates are subject to a high sampling error; nevertheless it appears that for male workers, the number of fringe workers has about the same ratio to total unemployment throughout, except in the early summer months, when a large number of youngsters are looking for work, on and off. For female workers, the pattern is erratic, but there is no conclusive evidence that the number of fringe workers changes proportionately with reported unemployment. In February 1948, the ratio of fringe workers to reported unemployment was 46.3, while in January 1950 after total unemployment had risen by about 60 per cent but fringe workers by only 30 per cent, the ratio was down to 37.1 per cent. To the extent that fluctuations are not due to sampling variability, they suggest that there may be a constant amount of unemployment among women that is intermittent in character and varying to some extent with the availability of temporary jobs, which is not uncovered by the present question. This may vary between 250,000 and 350,000—an amount which is small in relation to the size of the labor force, but not small in relation to reported unemployment. The problem apparently arises either because women in this group do not respond positively to the question "Were you looking for work?" since their activity is intermittent, or because there is some failure on the part of interviewers to observe prescribed procedures.

STATISTICS OF CENSUS BUREAU

To be measurable, a concept like unemployment should be so defined that it is reproducible, that is, the same procedures used again and again should give the same results. Although in practice the ideal is seldom achieved in surveys of this kind, the techniques aimed for should be such that, given adequately trained interviewers, it makes no serious difference who asks the questions and who answers them, approximately the same results are achieved. We have already seen in the comparison of survey and Decennial Census data that this condition was not met in those two measurements.

A much more unexpected and troublesome demonstration was furnished by the change in the current survey sample design in early 1954. From 1943 on, the CPS estimates had been based on a sample of 25,000 households located in sixty-eight sample areas. These sample areas comprised 125 counties and independent cities and the District of Columbia. The desirability of spreading the sample over more areas in order to reduce the sampling variability of the estimates had long been recognized, and as soon as the 1950 Census of Population data became available, the redesign of the sample got under way. Selection of the new set of areas was completed in mid-1952, using the same basic principles of sampling as before, but taking advantage of more up-to-date information for purposes of stratification.

In the new sample, the number of sample households was to remain the same (roughly 25,000) but the households were to be selected in 230 rather than sixty-eight sample areas covering approximately 450 counties. In order to operate the greater number of areas within the limits of the budget, the field staff organization was to be revised, and the number of supervisory offices consolidated from sixty-three to thirty-four.

Although the selection of sample counties was completed in 1952 (and was used for the collection of retail trade statistics beginning in early 1953) the new sample could not be introduced into the Current Population Survey until funds were available for recruitment and training of the new staff of interviewers. In mid-summer of 1953, it became possible to go ahead with this work. It was planned to continue the operation of the sixty-eight-area sample intact as the basis for the published figures until February 1954, and to activate the new areas and new interviewers gradually. One-third of the new sample was to be introduced on a trial basis in November 1953, one-third in December, and the final third in January 1954. After another month, the sixty-eight-area sample was to be dropped.

The experience of the 1940 and 1950 Censuses, and other surveys, had revealed the difficulties of obtaining adequate measures of employment and unemployment with relatively untrained field personnel.

STATISTICS OF CENSUS BUREAU

Consequently, in the sample changeover, the greatest possible attention was given to the task of training the new staff, while the old interviewers received the minimum of attention.

When the first results of the complete new sample became available for study after the January enumeration, it looked as if a statistical calamity had occurred. The new sample estimates of employment were almost identical with those from the sixty-eight-area sample, but the estimate of unemployment (and consequently of the civilian labor force) was about 700,000 higher. According to the sixty-eight-area sample, 3.8 per cent of the labor force was unemployed, according to the 230-area sample, 4.9 per cent. The change in sample areas could not have contributed much more than 300,000 to 400,000 of this difference in the level of unemployment and presumably somewhat less.⁶ In this case, some differences were noted in all age-sex groups, not just those where marginal or intermittent workers are expected.

Both sets of estimates for January were published on a preliminary basis while the problem was under study, in order that the public might become aware of the possibility that the level of unemployment might be considerably higher than earlier estimates had indicated. A great deal of publicity was given to the two sets of figures, and this publicity was at its height during the special interviewer training sessions that were held for both old and new interviewers just prior to the February survey. It is possible that as a result, unusually zealous efforts were made to obtain a complete count of unemployed persons; indeed, there may have been some overcounting in the sense of reporting all marginal cases as unemployed.

In any event, the February unemployment estimates were within 300,000 of each other, a difference of the order of magnitude that might have been expected to arise from the change in sample counties. Because the 230-area sample was a more efficient design, the sixty-eight-area sample was dropped after the February enumeration. Ideally, it might have been desirable to continue the old sample for a much longer period in order to establish with greater certainty whether differences of the same magnitude would have persisted, and to provide more light on the reasons for difference. Unfortunately, resources for supervision of the field staff had been stretched to the limit, and there was no possibility of improvising either staff or funds to keep both operations going. Evidence was accumulating that the sixty-eight-area estimates had begun to deteriorate during the fall of 1953 when it was

⁶ A Special Advisory Committee on Employment Statistics, under the chairmanship of Frederick F. Stephan of Princeton University, was appointed by the Secretary of Commerce to investigate the problem of the old versus the new sample (see the report of that committee for an intensive review of the evidence analyzed).

STATISTICS OF CENSUS BUREAU

necessary to devote an increasingly large proportion of time to the new 230-area operation. The absence of usual attention from their supervisors and the possibility of loss of jobs may have caused the experienced interviewers to become somewhat perfunctory in their work. The new interviewers, on the other hand, were entering on their jobs just as the discussions of the developing severity of unemployment began to hit the press and radio. Their attitudes may have differed substantially from those of the old staff.

It is not intended here to review all the factors that gave rise to the difficulties associated with the introduction of the new sample or to present the vast body of evidence that was accumulated in the months of analysis. Rather, the point to be made is that unforeseen or unforeseeable circumstances can affect the satisfactory measurement of the present concept of unemployment, despite the utmost care in planning. There should have been no differences between the old and the new sample estimates beyond those attributable to the change in sample counties and in sample households. The expected range of this difference was calculable. It had been recognized that there was a risk in assuming that the new interviewers would be adequately trained by February 1954, but it was not realized that the sixty-eight-area estimates were in jeopardy because of the withdrawal of supervisory attention. Whether any concept of unemployment is sufficiently reproducible to be measurable under similar circumstances is a question that demands the consideration of both consumers and producers of statistics in this field.

Work is now in process at the Census Bureau to develop a technique for checking the quality of the work of individual interviewers and measuring the over-all reliability of the national estimates themselves. For many years, the supervisory field staff had used the device of reinterviewing households to check the original returns, but no systematic program was followed. Beginning in February 1954, part of their regular duties became the reinterview of a small subsample of the work under their jurisdiction, using the same procedures as in the original interview. The households to be checked are designated by the Washington office each month. The results showed substantial gross but small net differences in the categories of persons at work part time, persons with a job but not at work, and persons reported as unemployed. These differences appeared to narrow as the check continued into later months. The difficulty of determining which classification was the correct one, and how much of the difference could be explained by a time lag, or memory lapse, led to the extension of the reinterview process to include a reconciliation of discrepancies between the two interviews, wherever possible.

STATISTICS OF CENSUS BUREAU

Concurrently with this experimentation, the device of a highly detailed reinterview is being tested—a procedure which does not aim at determining what the classification of the population would have been had the original interviewer followed the prescribed procedures without error, but rather seeks to develop all the information necessary to arrive at the “true” classification. This is the first attempt, as far as employment status measurement is concerned, to construct a “true” employment status distribution of the population. The Post-Enumeration Survey of the 1950 Census of Population and Housing was a pioneer effort to measure the errors in the original data on the size of the population and some of its characteristics—age, education, residence, occupation, industry, income, etc. It did not include, however, any check of employment status because of the lapse of time between the Census enumeration and the date of the Post-Enumeration Survey. In that check survey, the principle was used of asking more detailed questions on the original subject and then trying to explain why the two reports differed, in order to arrive at the true report. The aim of the present research is to develop some instrument of quality control and check that will be sufficiently sharp to detect the kind of drift in a series of data that apparently occurred in late 1953, in order to institute corrective action before a serious bias develops. Such a device would represent a prodigious advance in measurement technique and would give some promise of distinguishing between errors arising from the performance of the interviewers and those due to the ambiguity of the concepts used.

4. Some Alternative Measures of Lack of Work

POSSIBLE ALTERNATIVE MEASURES BASED ON CENSUS DATA

The preceding sections have outlined some of the evidence on the adequacy of the present Census measurement of unemployment. Despite all these problems of meaning and measurement, a statistical series is produced that seems to provide a reasonably good guide to changes taking place in the labor market. Undoubtedly, errors of various kinds have been too large for complete safety, at certain points in time; both levels and amounts of month-to-month change in the series have occasionally appeared to vary too far from the “unmeasurable,” true amount. Nevertheless, the number of people in a small sample of the population responding affirmatively to a question on looking for work has been highly correlated with other indicators of economic activity, showing turning points that are roughly coincident with business cycle peaks and troughs.⁷ It is well to remember this in looking over possible substitutes.

⁷ For a brief summary of the extensive analysis underlying this statement see

STATISTICS OF CENSUS BUREAU

One of the leading analysts of labor force data has remarked that as long as the measurement in use confirms general opinion of what is happening in the economy and agrees substantially with measurements from other sources, little attention is paid to the nature of the concepts. This is generally true, as far as the casual users of employment and unemployment statistics are concerned. But over the years, a variety of proposals for improving the Census figures on unemployment have been made by the specialized users of the data who for one reason or another are dissatisfied with the present concepts and their measurement. In some cases, these proposals have been based on considerations of logic, symmetry of classification, or intuitive beliefs on how the labor force behaves. In other cases, they appear to have been dictated by special interests of one kind or another. Whatever their motives, the critics have given impetus to expanding the types of detail made available by the Census Bureau from the monthly survey and can claim credit for the existence of so many different statistical building blocks.

Most of the discussions have centered around levels of unemployment, based on one concept or another, at a single point in time. Too little attention has been given to the effect on measurement of change from one point in time to another of the inclusion or exclusion of particular groups in the unemployment figures. If the categories in dispute are small in size, or remain constant over time, or change in the same way as does the present unemployment total, it obviously makes no difference how they are treated, as far as the usefulness of the unemployment figures as an economic indicator is concerned, once consumers are accustomed to the new levels. To the extent that the data are available or can be estimated, some of the more popular alternatives have been lined up here so that their changes over time may be examined. This review will show, I believe, that the movement of the present unemployment series would have been slightly dampened or magnified by some of the proposed adjustments but that, for the most part, the pattern originally recorded is largely unaffected.

The present labor force classification scheme includes among the employed some groups who, although attached to jobs, are by no means fully employed. For example, anyone who did any work for pay or in his own business, profession or farm, during the survey week is labeled as at work, regardless of how little he worked or how little he earned. Similarly, persons who performed some work without pay in their family business or farm, over and above incidental chores (defined as less than fifteen hours during a week) are labeled at work. Certain

STATISTICS OF CENSUS BUREAU

persons who did not work at all are also considered employed if they had jobs or businesses from which they were absent throughout the week and were not looking for other jobs: persons absent because of illness or other personal reasons, vacation, labor dispute, bad weather, or because they were on short-term (less than thirty-day) layoff, with definite instructions to return to work. Persons who were waiting to start work on new jobs within thirty days are also classified as employed during the survey week.

Among these groups with jobs or job attachments but little or no work during the survey week, there are a number of candidates for inclusion among the unemployed. The most popular are persons working part time because work is slack, persons on temporary layoff, and persons whose jobs have not yet started. These, it is believed, are affected by the same economic dislocations as are the job seekers. Other candidates for the unemployed include individuals whose failure to work full time may be attributed to external causes such as the weather or labor disputes rather than to personal or family reasons.

Thus, critics of the present concept who think statistics on unemployment which measure only the volume of job applicants are too restrictive tend to move toward a measurement of number of persons affected by the malfunctioning of the economic system; that is to say economic unemployment. A still more far-reaching concept is that of unemployment as a state of complete or partial idleness because of involuntary factors. Such factors range all the way from lack of jobs to any situation causing an interruption of full-time work other than one originating with the worker himself. This concept can be expanded even to include lack of work arising from illness. The count of unemployed would thus include all persons in the labor force able and willing to work full time who do not have full-time jobs at a given point in time.

Going still further, another modification of the present concept seeks to include in the labor force and the unemployed all persons who would be seeking work if they thought they could find a suitable job. It will be remembered that the present definition of unemployment classifies as an "inactive work seeker" a person who would have been seeking work except that he believes there is none available in his line of work or in the community. As we have seen, this is the most elusive category to isolate for accurate measurement. It was introduced originally to comprise only persons in stranded occupations or stranded areas who knew from frustrating experience that there were no longer any jobs to be had. Many kinds of seasonal workers and workers who come into the labor force on an occasional basis in response to special inducement or to meet special peak demands also may believe no work is available at other times. Therefore, it is argued, these too should be

STATISTICS OF CENSUS BUREAU

classified as unemployed when they are not working. By an extension of this reasoning, it is possible to include a substantial part of the population that works at any time during the year, or during any period of high employment. During 1953, for example, about 71 million persons worked at some time. Of this number, over 8 million were not in the labor force during the survey week in January 1954, 2 million of whom were women who had worked at some time during the year in agriculture. Apart from those who had become disabled, had definitely retired, or had returned to full-time school, none of these 8 million recent workers, it is sometimes argued, have voluntarily left the labor force in any real sense. Would they not be looking for some particular kind of job, if they thought it was available?

Unfortunately, this question can be answered at this point only by dogma, not data. Although we have made great advances in our knowledge of how the labor force changes, we are still only at the primitive stages in the understanding and measurement of individual motives for change. Accordingly, no attempt will be made here to speculate on variations in the volume of unemployment were it defined to include, in effect, all persons available for some kind of job.

It should be noted that none of the proponents of an expansion of the present concept to include persons who are involuntarily working less than full time would apply the test of "involuntariness" to the group now classified as unemployed. Reasons for looking for work obviously may be as diverse or as mixed as reasons for not working full time in any given week. Among the current job seekers are those who lost their last jobs for all sorts of reasons that have nothing to do with business conditions as well as those who were dissatisfied and left their last jobs voluntarily. Anyone who has tried to investigate why people change jobs knows the frustrations and pitfalls of classification, not to mention the problems of collecting meaningful data in the first place.

Whether or not they are aware of such difficulties, the major proponents of a more restrictive concept tend toward a definition based on activity and family characteristics rather than on motive. It is argued that active work seekers who are major breadwinners constitute the group of unemployed toward whom public concern and governmental programs should be directed. These critics are impatient with the omnibus character of the unemployment statistics. They regard the present unemployment figure as a large, undifferentiated total of family heads, primary workers, would-be baby sitters, floaters, unemployables, etc., and, therefore, seriously misleading as an economic indicator or a guide to the evaluation of the seriousness of the real problem. They also see few gains and some actual losses of precision in trying to

STATISTICS OF CENSUS BUREAU

broaden the "actively seeking work" test to include any jobless whose search for a new job may have been interrupted, postponed, or given up in discouragement.

In addition to the critics that would broaden or narrow the concept by adding or subtracting already identifiable classes in the present structure, there are those who believe that the present system either should be abandoned in favor of something else or supplemented by a totally different approach. One of these proposals, which could not be met with present statistical tools, is that the measurement of unemployment should be a measurement of unused human resources—that is, all persons who would like to work at jobs consistent with their training and experience, who are prevented from doing so because such opportunities are not available. Although none exists now, it is possible that research and experimentation could produce a satisfactory measurement of this concept.

Measurement of *time lost* as a result of total or partial unemployment is perhaps more frequently urged, to supplement the present approach. Counting as employed both a man who has only two days work a week and one who is working 8 hours of overtime, giving the same weight to each in the total, is not only illogical, it is argued, but tends to distort seriously any judgments on the "fullness" of employment. As a partial answer to the demand, it is possible to make rather rough estimates of time lost on the basis of currently available data, and more refined estimates might be feasible with a small amount of additional data. The results of such computations are discussed below.

The preceding list of alternatives is only suggestive of some that might be examined; an exhaustive list would include many other combinations of present data, as well as an unknown number of other proposals.

COMPARISON OF CHANGES IN TOTAL UNEMPLOYMENT AND IN ALTERNATIVE MEASURES OF LACK OF WORK

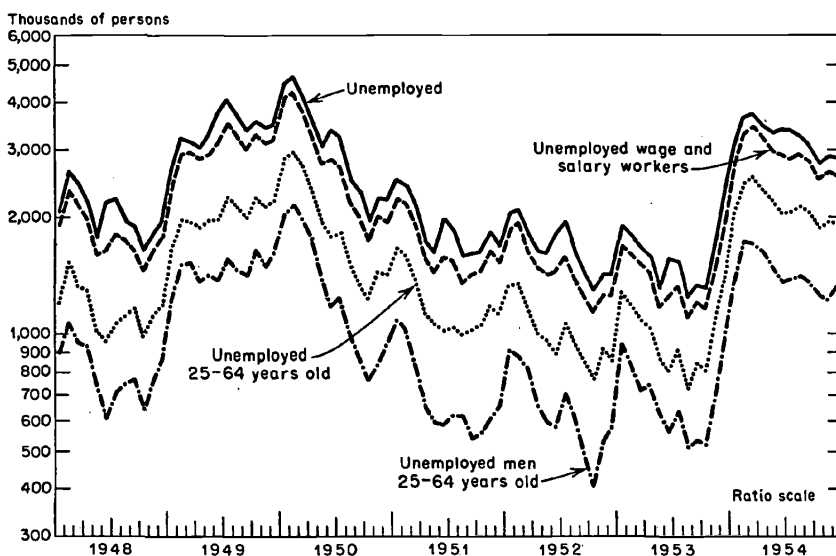
Differentiation of Total Unemployed. In Table A-8 and Chart 1, the figures on total unemployment have been broken down to show a series of components:

1. Adult unemployed workers of both sexes excluding those past retirement age (persons twenty-five to sixty-four years).
2. Adult male unemployed workers (twenty-five to sixty-four years). This component approximates a "major breadwinner" group and has the advantage of comprising those persons whose status of being unemployed is most susceptible to accurate measurement. For this group, the activity of "looking for work" generally accompanies the status of being "out of work."

STATISTICS OF CENSUS BUREAU

CHART 1

Unemployed Persons of Specified Types, Monthly, 1948-1954



Note: September 1953-January 1954 figures revised to correct for differences between 68-area and 230-area samples.

3. Unemployed wage and salary workers. It has been contended that the unemployment (and unemployment rates) of this component are much more sensitive than the total because of the elimination of the self-employed.

4. Unemployed family heads or married couples with husband unemployed. Information on marital status and family composition of the population is obtained through the CPS in April of each year (for March in 1950). Data on the number of unemployed family heads are available only for four of the past seven years. For each year, 1948-1953, the number of married couples in which the husband is unemployed has been tabulated, however, and this is very close to the number of unemployed heads (Table A-8). (A family head, as defined by the Census Bureau, is the head of any group of two or more persons related by blood, marriage, or adoption and residing together. Married couples are not all separate families; those living as part of a larger related group of persons are sub-families.)

None of the various monthly series described has been adjusted for seasonal variation. Had it been possible to do so, many of the differences revealed would have been almost eliminated. In the total unemployment figures are, of course, new workers and young vacation-time workers who account for the larger peaks in the mid-summer

STATISTICS OF CENSUS BUREAU

months. (Persons who never had a full-time job are excluded from the wage and salary figures, but otherwise those figures relate to the same age groups as does the total.) On the other hand, construction and other outdoor workers contribute an important segment of the series in adult unemployed male workers; their unemployment in the mid-winter months accounts for the sharper rise in this curve in most years and a more pronounced decline from January and February to the seasonal low.

Apart from these differences, there are no other significant ones, except for differences in level. Critical turning points in 1948, 1950, and 1953 have identical dates in the four series. The amplitude of the swings up and down are relatively larger for adult males in some cases.

Unemployment rates for all unemployed workers and for wage and salary workers are shown in Table A-9. Except that the rates for wage and salary workers average about 0.5 percentage point higher, there is no difference.

The relationship of the total number of unemployed persons to what approximates a count of families with unemployed heads (married couples) and to adult males is shown in Table 2 for a single month

TABLE 2
Comparison of Total Unemployed, Unemployed Adult Males,
and Married Couples with Husband Unemployed, Selected Dates 1948-1954
(number in thousands; April 1948 = 100)

MONTH AND YEAR	TOTAL UNEMPLOYED		UNEMPLOYED MALES 25-64 YEARS OLD		MARRIED COUPLES, HUSBAND UNEMPLOYED ^a	
	Number	Index	Number	Index	Number	Index
April 1948	2,193	100.0	928	100.0	712	100.0
April 1949	3,016	137.5	1,369	147.5	1,115	156.6
March 1950	4,123	188.0	1,980	213.4	1,503	211.1
April 1951	1,744	79.5	651	70.2	480	67.4
April 1952	1,612	73.5	646	69.6	464	65.2
April 1953	1,582	72.1	744	80.2	564	79.2
April 1954	3,465	158.0	1,635	176.2	1,328	186.5

^a For available months, the number of unemployed family heads is very close to this number: April 1949, 1,151,000; March 1950, 1,579,000; April 1951, 568,000; April 1952, 504,000.

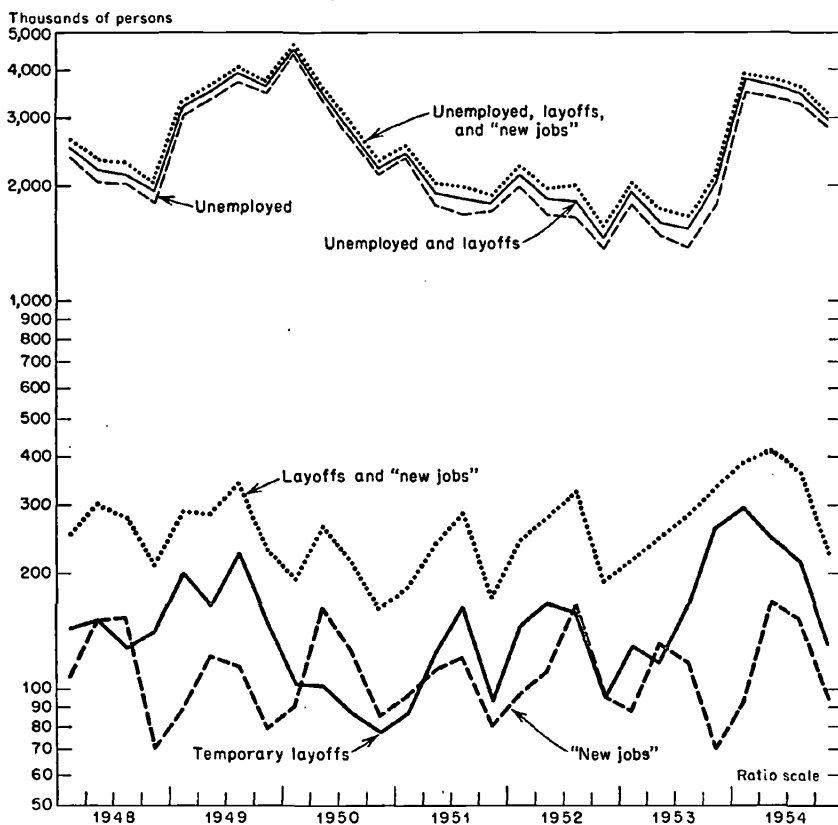
of each year. These rather scanty data suggest that the rise in unemployment both in 1949-1950 and in 1954 was more severe for the group approximating family heads or major breadwinners than for other workers.

Additions to Total Unemployed. Table A-10 and Chart 2 show the data for various groups and various combinations of groups that might supplement the present measurement of unemployment. Because of

STATISTICS OF CENSUS BUREAU

CHART 2

Unemployed Persons and Selected Groups of Employed Persons, Quarterly Averages, 1948-1954



Note: September 1953-January 1954 figures revised to correct for differences between 68-area and 230-area samples.

the instability of the small numbers, quarterly averages (averages of three months' observations) have been charted, where available.

1. Temporary layoffs: Persons not looking for work who have been laid off from their jobs with definite instructions to return within thirty days.

2. "New jobs": Persons waiting to start new jobs within thirty days.

3. Partially employed: Currently, information is obtained once a quarter about these groups, but between 1951 and 1953, data are available only infrequently.⁸ (a) Regular full-time workers working part-time (less than thirty-five hours for economic reasons—slack work,

⁸ See various reports on "Part-time Workers," *Current Population Reports*, Series P-50, Nos. 7, 12, 17, 18, 21, 25, 26, 28, 33, 34, 46, 52, and 53.

STATISTICS OF CENSUS BUREAU

material shortage, job turnover, etc.): "economic part-time workers"; and (b) regular part-time workers who prefer and could accept full-time jobs: "involuntary part-time workers." These two groups of part-time workers differ in composition. The first is to a large extent composed of men in manufacturing and construction, or working for themselves. About half of the second group are women; the group is concentrated in agriculture, trade, and service industries. However, the distinction between the two types of part-time workers becomes more difficult to make when unemployment continues for any length of time and many former full-time workers find themselves working short hours on a regular basis.

The relationship to total unemployment of these groups who have job attachments but less than full-time work or no work at all does not follow a fixed pattern. This is, in part, because they are affected by different factors to some extent and, in part, because the numbers are small and show erratic changes.

Temporary layoffs increased in 1951 and again in 1952 when total unemployment was virtually stabilized. The data are not too reliable, but they suggest that during the labor shortage era of the Korean hostilities, temporary slack periods as in textiles and apparel in 1951, and in steel and steel fabrication in 1952 were reflected in brief layoffs of a definite duration rather than in cuts in the work force. There is also a suggestion that the 1953 recession was signaled earlier by mounting temporary layoffs than by total unemployment figures.

It is difficult to detect any meaning in the changes in the number of persons waiting to start work on jobs they have been promised, except for the seasonal rise and fall with the school year calendar. One would expect this group to rise as layoffs decline, and vice versa, but this does not appear to be the case except for brief periods.

The addition to the unemployed of temporary layoffs alone, or of temporary layoffs and persons waiting to start their new jobs, raises the total slightly but obviously cannot affect very much the direction of movement because of the relatively small numbers involved. To the extent that the number of persons on temporary layoff has any distinctive meaning as a measure of a special type of labor market situation or as a prediction of unemployment to come, the meaning is lost in a combined figure.

Turning to partial employment as defined here, we find there is some indication that cutting back hours of full-time workers may precede cuts in staff or mass layoffs. Also, total unemployment and hours cutbacks seem to reach their maxima at slightly different dates; for regular full-time workers in nonagricultural industries, however, the agreement appears to be quite close in 1954, although not in 1949-1950

STATISTICS OF CENSUS BUREAU

(Table A-11). The absence of monthly figures over a period of years is a serious handicap in the analysis and permits only a tentative conclusion that this type of partial employment is not the same phenomenon as total unemployment.

The size of the group of regular part-time workers who have less work than they want is affected by seasonal factors as well as other changes in business conditions. The high points among these observations were reached in the August surveys, 1949, 1950, and 1954.

The effect of adding partially employed workers to those completely unemployed for the dates on which the information is available is shown in Table 3. With few exceptions the changes are magnified by adding partially employed persons. Decreases as well as increases are larger in the combined total, except in the few months when partial employment increased seasonally but unemployment declined or remained stable (notably September 1948, August 1950, and August 1954).

Whether there are any gains for the analyst or the policy maker in the alternative measure perhaps should not be decided on the basis of nineteen observations taken over a period of seven years. There seem to be reasons for continuing to regard total unemployment and partial employment as different types of maladjustments, requiring different remedies. Until more is known about how these phenomena are related, it may be a more satisfactory technical procedure to continue to make the data available separately.

Time Lost by Unemployment and Partial Employment. Estimates of man-hours of work provided by the economy and man-hours of time lost through unemployment and "underemployment" are available for the years 1947-1949, prepared by Thomas K. Hitch,⁹ for the most part on the basis of Census data. Briefly, the computation consists of assuming that the unemployed and persons on temporary layoff or waiting to start new jobs had lost approximately forty hours of work on the average, and that the number of man-hours lost by the partially employed (i.e., those full-time workers working less than thirty-five hours because of economic reasons and other part-time workers who prefer full-time work) was equal to the difference between what they actually worked and approximately forty hours.

The number of man-hours of work provided by the economy was estimated by adding man-hours actually worked to the imputed hours that presumably were available to persons on vacation, ill, out for reasons of bad weather or personal factors for all or part of the survey week. Many of the factors entering into these computations were fairly

⁹ Thomas K. Hitch, "Meaning and Measurement of 'Full' or 'Maximum' Employment," *Review of Economics and Statistics*, February 1951.

STATISTICS OF CENSUS BUREAU

TABLE 3
Changes in Total Unemployment and Partial Employment
between Selected Dates, 1948-1954
(number in thousands)

MONTH AND YEAR	CHANGE IN UNEMPLOYMENT		CHANGE IN PARTIAL EMPLOYMENT		CHANGE IN UNEMPLOYMENT PLUS PARTIAL EMPLOYMENT	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
1948:						
March						
September	-541	-22.2	+147	+12.1	-394	-10.8
1949:						
May	+1,390	+73.2	+1,097	+80.7	+2,487	+76.3
August	+400	+12.2	+98	+4.0	+498	+8.7
November	-280	-7.6	-203	-7.9	-483	-7.7
1950:						
February	+1,275	+37.4	-269	-11.4	+1,006	+17.5
May	-1,627	-34.7	+72	+3.5	-1,555	-23.0
August	-557	-18.2	+202	+9.4	-355	-6.8
November	-260	-10.4	-550	-23.3	-810	-16.7
1951:						
February	+167	+7.5	+164	+9.1	+331	+8.2
May	-798	-33.2	-174	-8.8	-972	-22.2
1952:						
May	-7	-0.4	-75	-4.2	-82	-2.4
November	-184	-11.5	-324	-18.8	-508	-15.3
1953:						
May	-112	-7.9	-12 ^a	-0.9	-124	-4.4
December	+1,007 ^b	+77.1	+854 ^b	+61.6	+1,861	+69.1
1954:						
March	+1,412	+61.0	+516	+23.0	+1,928	+42.3
May	-420	-11.3	-164	-6.0	-584	-9.0
August	-60	-1.8	+455	+17.6	+395	+6.7
November	-352	-10.8	-468	-15.4	-820	-13.0

^a Estimated by applying the distribution of part-time workers by type in each hours-worked category in November 1952 to hours-worked categories for May 1953.

^b Revised to correct for differences between 68-area and 230-area samples.

firmly based on direct surveys by the Census Bureau of part-time workers; others had to be assumed. The percentage of labor force time lost because of unemployment and related types of idleness was only slightly higher than the traditional unemployment rate and showed almost the same pattern of movement; no real significance could be attributed to any differences. Moreover, the computation of labor force time provided on an actual or imputed basis involves so many assumptions about the hours that could have been worked by various types

STATISTICS OF CENSUS BUREAU

of workers that the resultant numbers are, to say the least, synthetic. Finally, the assumption of a fixed number of man-hours lost (forty) by the unemployed and the "with a job" group means that the relative severity of joblessness will seem to decrease as the number of man-hours actually worked by the employed sector of the labor force rises. Thus, to some extent hours lost by the unemployed are offset by over-time hours, just as with the traditional unemployment rate, unadjusted for seasonal variation, the severity of unemployment may appear to diminish simply because agricultural employment is temporarily rising.

The key to most of the computations made by Hitch was the information derived from the Census Bureau's special surveys of part-time workers, which were conducted quarterly from May 1949 through May 1951. As indicated earlier they were conducted only occasionally between 1951 and 1954. No satisfactory method has been found to interpolate for the long gaps between surveys. For purposes of comparison with other measures, examination of man-hours lost must be limited to dates when statistics for part-time workers are available.

A slightly different method of computing man-hours lost has been used here, in order to reflect the changing distribution of hours worked during the period. It involves the following steps:

1. Assume that there is no involuntary part-time work or partial employment for economic reasons and add into the man-hours actually worked the estimated man-hours lost by these two groups of part-time workers.

2. Recompute average hours worked, dividing the adjusted man-hours worked by the total number of persons at work.

3. Assume that the unemployed and those persons on temporary layoff or waiting to start new jobs would have averaged this adjusted number of hours had they actually worked; multiply the number of persons in these three groups by the average computed in step two. (The estimate obtained is 2 to 4 per cent higher than any derived by taking account of the industrial composition of the unemployed and "with a job" groups and computing man-hours lost, industry by industry. Unfortunately, detailed data are available for this more refined calculation only in the months since September 1953.)

4. Add to (3) the estimated man-hours lost by the part-time workers. This sum equals the estimated man-hours lost because of unemployment, partial employment, temporary layoffs, and time spent waiting for new jobs to start.

Changes in this aggregate are compared with changes in total unemployment and in total unemployment plus partial employment, etc. in Table A-12. In Table 4, the same data are shown in relation to November 1952, the lowest *observed* point for the combined measure.

STATISTICS OF CENSUS BUREAU

The index of man-hours lost obviously is very close in most months to that for the number of persons affected by unemployment and lack of work arising from the other specified causes. This follows from the method of estimation, in which the only factor which could cause difference is the amount of time lost by the partially employed.

Total unemployment alone is more sensitive than these aggregate measures, or at least has relatively sharper changes from low to high. In the 1950 peak, the index of total unemployment was 330.3 compared with 229.3 for aggregate number of persons affected by the various factors combined and 258.1 for aggregate man-hours lost. In March 1954, the differences were not so large but still noteworthy (262.7 as

TABLE 4
Indexes of Number of Persons Affected and Man-Hours Lost by
Unemployment, Partial Employment, Temporary Layoffs, and
"New Jobs," Selected Months, 1949-1954
(November 1952 = 100)

<i>Month and Year</i>	<i>Total Unemployment</i>	<i>Total Unemployment plus Partial Employment plus Temporary Layoffs and "New Jobs"</i>	<i>Man-hours Lost by Total Unemployment, Partial Employment, Temporary Layoffs and "New Jobs"</i>
1949:			
May	231.9	199.8	209.4
August	260.2	218.3	236.4
November	240.4	198.2	209.7
1950:			
February	330.3	229.3	258.1
May	215.6	181.2	192.4
August	176.3	166.8	171.0
November	158.0	139.0	145.6
1951:			
February	169.7	150.7	153.0
May	113.5	119.7	118.3
1952:			
May	113.0	118.2	116.0
November	100.0	100.0	100.0
1953:			
May ^a	92.1	98.1	97.6
December ^b	163.1	163.1	161.4
1954:			
March	262.7	225.9	230.1
May	233.1	208.4	211.2
August	228.8	218.5	218.3
November	204.0	189.9	189.4

^a Partial employment estimated on the basis of November 1952 data.

^b Revised to correct for differences between 68-area and 230-area samples.

STATISTICS OF CENSUS BUREAU

compared with 225.9 and 230.1). Except for the greater amplitude of change noted, they all tell much the same story. However, a global concept of unemployment that included in a single total all these forms of lack of work, some of which do not always reflect changing business conditions, might actually be less useful as a barometer than is the present concept.

5. *Tentative Recommendation*

To stimulate discussion, I should like to propose, as a possible compromise, a new arrangement of the current monthly labor force data. Needless to say, this represents my own personal preference, and not the official position of the Census Bureau. Several changes would be required:

1. Attempts should be abandoned to include among the unemployed each month those inactive work seekers who would have been seeking work except for temporary illness or belief no work was available. The state of unemployment is a matter largely of attitude in these cases. Since no way has been found as yet to provide accurate measurements of changing attitudes with present procedures, I suggest that the concept be changed, at least until techniques are developed. Instead, special surveys on a quarterly or semiannual basis might be used to provide an approximate measure of this elusive segment of the labor supply.

2. Data on reasons for part-time work should be collected every month, as is done in Canada.

3. A new, major category would be introduced, comprising those persons who worked less than full-time during the survey week because of business conditions (the groups now labeled "economic" and "involuntary" part-time workers). Throughout the preceding discussion they have been called the "partially employed" to be consistent with current terminology. However, for a three-way breakdown of the labor force, a more convenient term and one that would more clearly distinguish them from the employed would be "partially unemployed."

4. The unemployed category (or better, the totally unemployed) would consist of two subgroups:

- a. Persons actively seeking work (including specifically those registered at public employment offices).

- b. Persons who had been laid off either temporarily or indefinitely from their jobs and were waiting to be called back rather than looking for new jobs. It might be necessary to impose a time limit on the length of layoff in order to eliminate persons who, in fact, had withdrawn from the labor force for a long period. Persons waiting to start new jobs, however, would remain in the employed, because trends in their

STATISTICS OF CENSUS BUREAU

number seem to bear no relation to the changes in the unemployed and they appear to be typically labor force entrants.

The following employment status distribution of the civilian population could then be provided each month:

- Civilian labor force
 - Employed
 - At work
 - With a job but not at work
 - Partially unemployed
 - Totally unemployed
 - Seeking work
 - Waiting recall to job
- Not in labor force

I believe that these modifications might meet several needs without serious loss of content or disruption of the continuity of the data on total unemployment. Obviously, it would be necessary to test in advance the effect on the level and movement of the unemployment count of discontinuing the inclusion of the two inactive groups and adding in those on temporary layoff who are now classified as employed. It is possible that the two changes might offset each other, if accompanied by a clarification and sharpening of the question on looking for work. In any case, it appears to me that the resulting figures on total unemployment would describe a relatively homogeneous group, and that the two components could be measured satisfactorily. Possible losses in the scope of the concept might be compensated for by a greater objectivity and precision in the monthly figures.

6. *Summary and Conclusions*

1. The present Census concept of unemployment provides a measure of the number of job applicants who have no other work during a calendar week.

2. Because job applicants seek work with varying degrees of activity and persistence, it is difficult to obtain a complete count with present survey procedures.

3. No source of the "true" level of unemployment as currently defined has been found. Complete counts of the population are defective because of enumeration problems, and efforts to measure errors from the survey itself have been only partially successful. Such efforts do suggest that the number of unemployed who may be incorrectly classified as outside the labor force does not vary directly with economic conditions.

4. Alternative concepts that are frequently suggested are of two

STATISTICS OF CENSUS BUREAU

main groups (a) breakdowns of the unemployed to find a measure that reflects only changes in economic conditions and reflects them as accurately as possible and (b) expansions of the present concept to include all persons who are affected by shortage of work, whether or not they have jobs.

5. Although it may always fall short in terms of level, the present unemployment series is the most sensitive of the various alternatives except a series based on the number of unemployed adult males. Other possible variations raise the level but do not substantially alter the pattern of change, except in a few instances.

6. The figures on partial employment (or partial unemployment) are the most valuable of the supplementary indexes, since they do more than mirror the total unemployment figures and may have predictive value. It would be very desirable to collect them every month.

7. Except for political uses, it is generally advantageous to maximize the significant breakdowns of the labor force and minimize the use of global terms and concepts. Unfortunately, the reliability of the breakdowns is not always adequate from the standpoint of sampling error.

8. A relatively simple solution to some of the conceptual and measurement problems might be achieved if a third category of partially unemployed were distinguished in the labor force and if the totally unemployed group were separated into job seekers and persons awaiting recall to their old jobs. Attempts to measure other possible segments of the labor supply might better be made as special surveys.

STATISTICS OF CENSUS BUREAU

Appendix
TABLE A-1
Estimates of Unemployed Workers by Type, Quarterly Months, 1940-1945

MONTH AND YEAR	NONEMERGENCY WORKERS									
	TOTAL	EMERGENCY WORKERS ^a	Total	Actively Seeking Work	Inactive Unemployed					
					Total	No Work Available or Seasonal	Layoff— Indefinite	Illness	Other ^b	
										Reason for Not Seeking Work
Thousands of Persons, 14 Years Old and Over										
1940	July	7,413	2,163	5,250	4,200	1,050	333	310	240	167
	October	6,531	2,351	4,180	3,390	790	239	116	333	102
1941	January	6,801	2,657	4,144	3,212	932	175	345	335	77
	April	5,814	2,398	3,416	2,521	895	103	362	353	77
	July	5,235	1,723	3,512	3,077	435	65	91	279	
	October	3,462	1,519	1,943	1,559	384	67	81	236	
1942	January	3,893	1,417	2,476	2,015	461	37	188	236	
	April	2,738	1,218	1,520	1,237	283	28	76	179	
	July	2,427	714	1,713	1,448	265	14	74	177	
	October	1,451	472	979	782	197	11	47	139	
1943	January	1,370	364	1,006	748	258	5	52	201	
	April	950	159	791	573	218	7	39	172	
	July	1,290		1,290	949	341	5	54	282	
	October	910		910	529	381	14	51	316	
1944	January	1,079		1,079	555	524	15	148	361	
	April	776		776	440	336	16	50	270	
	July	995		995	616	379	8	95	276	
	October	633		633	312	321	10	47	264	
1945	January	839		839	438	401	11	103	287	
	April	764		764	380	384	3	108	273	
	July	1,087		1,087	612	475	3	129	343	

(continued on next page)

STATISTICS OF CENSUS BUREAU

TABLE A-1 (continued)

NONEMERGENCY WORKERS									
Inactive Unemployed									
Reason for Not Seeking Work									
MONTH AND YEAR	TOTAL	EMERGENCY WORKERS ^a	Total	Actively Seeking Work	Total	No Work Available or Seasonal	Layoff—		Others ^b
							Indefinite	Illness	
Percentage Distribution of Nonemergency Workers									
1940	July		100.0	80.0	20.0	6.4	5.9	4.6	3.2
	October		100.0	81.1	18.9	5.7	2.8	8.0	2.4
	January		100.0	77.5	22.5	4.2	8.3	8.1	1.9
	April		100.0	73.8	26.2	3.0	10.6	10.3	2.3
1941	July		100.0	87.6	12.4	1.9	2.6	7.9	
	October		100.0	80.2	19.8	3.4	4.2	12.2	
	January		100.0	81.4	18.6	1.5	7.6	9.5	
	April		100.0	81.4	18.6	1.8	5.0	11.8	
1942	July		100.0	84.5	15.5	0.8	4.3	10.4	
	October		100.0	79.9	20.1	1.1	4.8	14.2	
	January		100.0	74.4	25.6	0.5	5.1	20.0	
	April		100.0	72.4	27.6	0.9	4.9	21.8	
1943	July		100.0	73.6	26.4	0.4	4.2	21.8	
	October		100.0	58.1	41.9	1.6	5.6	34.7	
	January		100.0	51.4	48.6	1.4	13.7	33.5	
	April		100.0	56.7	43.3	2.1	6.4	34.8	
1944	July		100.0	61.9	38.1	0.8	9.5	27.8	
	October		100.0	49.3	50.7	1.6	7.4	41.7	
	January		100.0	52.2	47.8	1.3	12.3	34.2	
	April		100.0	49.7	50.3	0.4	14.1	35.8	
1945	July		100.0	56.4	43.6	0.3	11.8	31.5	

^a Official figures of persons on WPA, CCC, NYA (except students), and other work programs.

^b Until April 1941, persons not seeking work for other reasons were divided into those who appeared to be in the labor force and those who did not. It proved impossible to make this decision satisfactorily, and the group was treated as not in the labor force.

Note: Data not revised for schedule change in July 1945.

STATISTICS OF CENSUS BUREAU

TABLE A-2

Comparison of Statistics on Employment Status from the WPA Monthly Report of Unemployment and the 1940 Census of Population, March 24-30, 1940
(millions of persons, 14 years old and over)

<i>Employment Status</i>	<i>WPA Monthly Report of Unemployment (1)</i>	<i>1940 Census of Population^a (2)</i>	<i>Difference (1) — (2) (3)</i>	<i>Per Cent Difference (3) ÷ (1) (4)</i>
Civilian noninstitutional population	99.4	99.4	0	
In labor force	53.9	52.5	1.4	2.6
Employed	45.1	45.0	0.1	0.2
At work	43.7	43.7	0	
With a job but not at work	1.4	1.3	0.1	7.1
Unemployed	8.8	7.5	1.3	14.8
On public emergency work	2.7	2.4	0.3	11.1
Other unemployed	6.1	5.1	1.0	16.4
Not in labor force	45.4	45.1	0.3	0.7
Keeping house	29.4	28.8	0.6	2.0
In school	9.3	9.1	0.2	2.2
Unable to work	5.1	5.2	-0.1	-2.0
Other	1.6	2.0	-0.4	-25.0
Not ascertainable	0.1	1.8	-1.7	

^a Data from a 5 per cent sample of returns of 1940 Census of Population.

Source: "Changes in Employment, Unemployment, and the Labor Force between June and July 1941, with Estimates for the Period April 1940 to July 1941," Monthly Report of Unemployment, mimeographed, Federal Works Agency, Work Projects Administration, undated.

TABLE A-3

Comparison of Statistics on Employment Status from Current Population Survey
for April 1950 and the 1950 Census of Population, by Sex
(thousands of persons, 14 years old and over)

<i>Employment Status and Sex</i>	<i>CPS^a</i> (1)	<i>Census^b</i> (2)	<i>Difference</i> (1) - (2) (3)	<i>Per Cent</i> <i>Difference</i> (3) ÷ (1) (4)
Both Sexes:				
Civilian noninstitutional population	109,928	109,928	0	
In labor force	62,675	59,072	3,603	5.7
Employed	59,131	56,239	2,892	4.9
In agriculture	7,259	6,885	374	5.2
At work	7,007	6,718	289	4.1
With a job but not at work	252	167	85	33.7
In nonagricultural industries	51,873	49,354	2,519	4.9
At work	50,264	47,701	2,563	5.1
With a job but not at work	1,609	1,653	-44	-2.7
Unemployed	3,543	2,832	711	20.1
Not in labor force	47,254	50,856	-3,602	-7.6
Keeping house	33,182	32,180	1,002	3.0
Unable to work	2,359	4,566	-2,207	-93.6
In school, other, and not reported	11,713	14,110	-2,397	-20.5
Male:				
Civilian noninstitutional population	53,478	53,478	0	
In labor force	44,543	42,599	1,944	4.4
Employed	41,890	40,519	1,371	3.3
In agriculture	6,332	6,297	35	0.6
At work	6,125	6,171	-46	-0.8
With a job but not at work	207	126	81	39.1
In nonagricultural industries	35,558	34,222	1,336	3.8
At work	34,532	33,160	1,372	4.0
With a job but not at work	1,026	1,062	-36	-3.5
Unemployed	2,653	2,079	574	21.6
Not in labor force	8,936	10,879	-1,943	-21.7
Keeping house	96	286	-190	
Unable to work	1,573	2,754	-1,181	-75.1
In school, other, and not reported	7,267	7,839	-572	-7.9
Female:				
Civilian noninstitutional population	56,450	56,450	0	
In labor force	18,132	16,473	1,659	9.1
Employed	17,241	15,720	1,521	8.8
In agriculture	927	588	339	36.6
At work	882	547	335	38.0
With a job but not at work	45	41	4	8.9
In nonagricultural industries	16,315	15,132	1,183	7.3
At work	15,733	14,541	1,192	7.6
With a job but not at work	582	591	-9	-1.5
Unemployed	890	753	137	15.4
Not in labor force	38,318	39,977	-1,659	-4.3
Keeping house	33,086	31,894	1,192	3.6
Unable to work	786	1,812	-1,026	
In school, other, and not reported	4,446	6,270	-1,824	-41.0

^a Adjusted, by sex, to the 1950 census levels of the civilian noninstitutional population, 14 years old and over.

^b Complete count data except for "at work" and "with a job" breaks; these are estimated from a 3⅓ per cent sample.

STATISTICS OF CENSUS BUREAU

TABLE A-4

Comparison of Estimates of Employment Status Based on Reports for Identical Persons
Enumerated in the Same Week by Current Population Survey and 1950
Census Enumerators, by Sex, April 1950
(thousands of persons, 14 years old and over)

<i>Employment Status and Sex</i>	<i>Based on CPS Enumeration (1)</i>	<i>Based on Census Enumeration (2)</i>	<i>Difference (1) - (2) (3)</i>	<i>Per Cent Difference (3) ÷ (1) (4)</i>
Both Sexes:				
Civilian noninstitutional population	109,928	109,928	0	
In labor force	63,081	59,983	3,098	4.9
Employed	59,204	57,036	2,168	3.7
In agriculture	7,715	6,488	1,227	15.9
In nonagricultural industries	51,489	50,548	941	1.8
Unemployed	3,877	2,947	930	24.0
Not in labor force	46,847	49,945	-3,098	-6.6
Male:				
Civilian noninstitutional population	53,478	53,478	0	
In labor force	45,145	43,584	1,561	3.5
Employed	42,283	41,392	891	2.1
In agriculture	6,709	6,048	661	9.9
In nonagricultural industries	35,574	35,344	230	0.6
Unemployed	2,862	2,192	670	23.4
Not in labor force	8,333	9,894	-1,561	-18.7
Female:				
Civilian noninstitutional population	56,450	56,450	0	
In labor force	17,936	16,399	1,537	8.6
Employed	16,921	15,644	1,277	7.5
In agriculture	1,006	440	566	56.3
In nonagricultural industries	15,915	15,204	711	4.5
Unemployed	1,015	755	260	25.6
Not in labor force	38,514	40,051	-1,537	-4.0

STATISTICS OF CENSUS BUREAU

TABLE A-5

Gross Differences in Employment Status for Unemployed Persons
Enumerated in the Same Week by Current Population Survey
and 1950 Census Enumerators, by Sex, April 1950
(thousands of persons, 14 years old and over)

<i>Employment Status</i>	<i>Unemployed in CPS, Not Unemployed in Census</i>	<i>Unemployed in Census, Not Unemployed in CPS</i>	<i>Difference</i>
Both sexes	1,976	1,046	930
	<i>Census Status</i>	<i>CPS Status</i>	
Employed in agriculture	31	45	-14
Employed in nonagricultural industries	801	388	413
Not in labor force	1,144	613	531
Male	1,336	666	670
	<i>Census Status</i>	<i>CPS Status</i>	
Employed in agriculture	31	45	-14
Employed in nonagricultural industries	654	359	295
Not in labor force	651	262	389
Female	640	380	260
	<i>Census Status</i>	<i>CPS Status</i>	
Employed in agriculture			
Employed in nonagricultural industries	147	29	118
Not in labor force	493	351	142

STATISTICS OF CENSUS BUREAU

TABLE A-6

Reason for Not Looking for Work at Survey Date, Specified Groups Not in the Labor Force, by Sex, August 1946, and May and June 1947
(thousands of persons, 14 years old and over)

<i>Reason and Sex</i>	<i>August 1946^a</i>	<i>May 1947^b</i>	<i>June 1947^c</i>
Both sexes	7,681	1,854	2,892
Reasons suggesting attachment to labor force	1,500	220	563
Believe no work available	363	99	352
Temporarily ill	619	43	84
On layoff; off season	338	25	10
Awaiting results of previous job application	180	53	117
Other reasons	6,181	1,634	2,329
Busy with home responsibilities	2,156	361	550
School	1,277	260	792
Do not want work, or resting	1,640	385	229
All other	1,108	628	758
Male	2,197	591	1,113
Reasons suggesting attachment to labor force	358	94	212
Believe no work available	149	55	119
Temporarily ill	147	15	47
On layoff; off season	9	4	3
Awaiting results of previous job application	53	20	43
Other reasons	1,839	497	901
Busy with home responsibilities	23	7	34
School	926	168	507
Do not want work, or resting	487	127	119
All other	403	195	241
Female	5,484	1,263	1,779
Reasons suggesting attachment to labor force	1,142	126	351
Believe no work available	214	44	233
Temporarily ill	472	28	37
On layoff; off season	329	21	7
Awaiting results of previous job application	127	33	74
Other reasons	4,342	1,137	1,428
Busy with home responsibilities	2,133	354	516
School	351	92	285
Do not want work, or resting	1,153	258	110
All other	705	433	517

^a Persons not in the labor force who had worked or looked for work during the past year, and World War II veterans.

^b Persons not in the labor force who had worked or looked for work during the past two months.

^c Persons not in the labor force who wanted a job.

STATISTICS OF CENSUS BUREAU

TABLE A-7

Persons Not in the Labor Force Who Had Recently Looked for Work,
by Sex and Availability for Work, Selected Dates, 1948-1950
(thousands of persons, 14 years old and over)

<i>Sex and Availability for Work</i>	<i>Feb. 1948</i>	<i>June 1948</i>	<i>May 1949</i>	<i>Jan. 1950</i>	<i>June 1950</i>
Both sexes	662	494	736	1,018	861
Still wanted work at time of survey	539	423	664	705	773
Could take a job	494 ^a	386	525	667	720
Wanted full-time work	n.a.	n.a.	n.a.	334	536
Wanted part-time work	n.a.	n.a.	n.a.	333	184
Could not take a job	45	38	138	38	53
No longer wanted work	106	61	63	313	88
Not reported	17	8	10		
Male	213	162	270	344	346
Still wanted work at time of survey	162	136	247	232	325
Could take a job	147 ^a	122	165	215	308
Wanted full-time work	n.a.	n.a.	n.a.	72	217
Wanted part-time work	n.a.	n.a.	n.a.	143	91
Could not take a job	15	14	82	17	17
No longer wanted work	46	22	19	112	21
Not reported	5	3	5		
Female	449	332	466	674	515
Still wanted work at time of survey	377	287	417	473	448
Could take a job	347 ^a	264	360	452	412
Wanted full-time work	n.a.	n.a.	n.a.	262	319
Wanted part-time work	n.a.	n.a.	n.a.	190	93
Could not take a job	30	24	56	21	36
No longer wanted work	60	39	44	201	67
Not reported	12	5	5		

^a Information was not obtained in February 1948 as to whether those reported as still wanting work could also have taken a job at that time. This number is estimated from detailed distributions by age and sex shown in the June 1948 and May 1949 surveys.

n.a. = not available.

Note: "Recently" was specified as since Christmas 1947, for the February 1948 survey, and since the first of the preceding month, for the other four surveys.

STATISTICS OF CENSUS BUREAU

TABLE A-8

Unemployed Persons of Specified Types, Monthly, 1948-1954
(thousands)

<i>Month and Year</i>	<i>Total Unemployed</i>	<i>Unemployed 25-64 Years Old</i>	<i>Unemployed Men 25-64 Years Old</i>	<i>Unemployed Wage and Salary Workers</i>	<i>Married Couples with Husband Unemployed</i>
1948:					
January	2,065	1,198	898	1,896	
February	2,639	1,522	1,072	2,369	
March	2,440	1,322	945	2,149	
April	2,193	1,295	928	1,972	712
May	1,761	1,007	707	1,598	
June	2,184	957	605	1,640	
July	2,227	1,058	712	1,808	
August	1,941	1,110	749	1,743	
September	1,899	1,165	764	1,635	
October	1,642	981	636	1,446	
November	1,831	1,116	766	1,650	
December	1,941	1,184	868	1,773	
1949:					
January	2,664	1,634	1,236	2,433	
February	3,221	1,975	1,514	2,928	
March	3,167	1,935	1,521	2,935	
April	3,016	1,873	1,369	2,816	1,115
May	3,289	1,957	1,409	2,905	
June	3,778	1,960	1,370	3,130	
July	4,095	2,248	1,578	3,504	
August	3,689	2,126	1,462	3,284	
September	3,351	1,997	1,412	2,979	
October	3,576	2,253	1,665	3,287	
November	3,409	2,138	1,494	3,107	
December	3,489	2,213	1,612	3,194	
1950:					
January	4,480	2,823	2,061	4,152	
February	4,684	2,947	2,162	4,287	
March	4,123	2,713	1,980	3,776	1,503
April	3,515	2,343	1,759	3,194	
May	3,057	1,937	1,372	2,762	
June	3,384	1,787	1,183	2,806	
July	3,213	1,810	1,246	2,690	
August	2,500	1,494	981	2,185	
September	2,341	1,348	860	2,019	
October	1,940	1,229	759	1,733	
November	2,240	1,466	839	2,014	
December	2,229	1,434	956	1,951	

(continued on next page)

TABLE A-8 (continued)
(thousands)

<i>Month and Year</i>	<i>Total Unemployed</i>	<i>Unemployed 25-64 Years Old</i>	<i>Unemployed Men 25-64 Years Old</i>	<i>Unemployed Wage and Salary Workers</i>	<i>Married Couples with Husband Unemployed</i>
1951:					
January	2,503	1,674	1,093	2,249	
February	2,407	1,589	1,020	2,179	
March	2,147	1,381	816	1,899	
April	1,744	1,138	651	1,562	480
May	1,609	1,056	595	1,431	
June	1,980	1,022	585	1,578	
July	1,856	1,040	622	1,538	
August	1,578	994	618	1,346	
September	1,606	1,024	538	1,420	
October	1,616	1,050	560	1,452	
November	1,828	1,170	612	1,638	
December	1,674	1,128	654	1,514	
1952:					
January	2,054	1,334	906	1,870	
February	2,086	1,340	874	1,930	
March	1,804	1,144	810	1,610	
April	1,612	1,002	646	1,478	464
May	1,602	962	592	1,414	
June	1,818	890	576	1,454	
July	1,942	1,064	706	1,582	
August	1,604	942	602	1,378	
September	1,438	848	482	1,250	
October	1,284	768	408	1,130	
November	1,418	914	530	1,260	
December	1,412	856	582	1,246	
1953:					
January	1,892	1,288	946	1,694	
February	1,788	1,182	830	1,592	
March	1,674	1,086	712	1,500	
April	1,582	1,036	744	1,438	564
May	1,306	866	623	1,172	
June	1,562	806	566	1,248	
July	1,548	910	634	1,332	
August	1,240	732	510	1,104	
September ^a	1,321	845	535	1,207	
October ^a	1,301	807	521	1,164	
November ^a	1,699	1,106	705	1,540	
December ^a	2,313	1,444	969	2,030	
1954:					
January	3,087	2,037	1,381	2,770	
February	3,671	2,454	1,717	3,308	
March	3,725	2,526	1,716	3,442	
April	3,465	2,357	1,635	3,208	1,328
May	3,305	2,226	1,490	2,961	
June	3,347	2,056	1,373	2,903	
July	3,346	2,063	1,388	2,843	
August	3,245	2,123	1,403	2,905	
September	3,099	2,067	1,364	2,791	
October	2,741	1,880	1,253	2,498	
November	2,893	1,931	1,229	2,603	
December	2,838	1,915	1,325	2,567	

^a Revised to correct for difference between 68-area and 230-area samples.

TABLE A-9
Unemployment Rates for All Unemployed Workers and for Unemployed
Wage and Salary Workers, Monthly, 1948-1954
(per cent)

Unemployed Workers	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1948:												
All	3.5	4.4	4.1	3.6	2.9	3.4	3.5	3.1	3.1	2.7	3.0	3.2
Wage and salary	4.0	5.0	4.5	4.1	3.4	3.3	3.6	3.5	3.4	3.0	3.4	3.6
1949:												
All	4.4	5.3	5.2	5.0	5.3	6.0	6.4	5.8	5.3	5.7	5.4	5.6
Wage and salary	5.1	6.1	6.1	5.9	6.0	6.5	7.1	6.5	6.0	6.5	6.2	6.5
1950:												
All	7.3	7.6	6.7	5.7	4.9	5.2	5.0	3.9	3.7	3.0	3.5	3.6
Wage and salary	8.4	8.6	7.6	6.4	5.6	5.5	5.3	4.2	4.0	3.4	3.9	3.8
1951:												
All	4.1	3.9	3.4	2.8	2.6	3.1	2.9	2.5	2.5	2.5	2.9	2.7
Wage and salary	4.5	4.3	3.7	3.1	2.8	3.1	3.0	2.6	2.8	2.8	3.2	2.9
1952:												
All	3.3	3.4	2.9	2.6	2.6	2.8	3.0	2.5	2.3	2.0	2.2	2.2
Wage and salary	3.7	3.8	3.2	2.9	2.8	2.8	3.0	2.6	2.4	2.2	2.4	2.4
1953:												
All	3.0	2.9	2.7	2.5	2.1	2.4	2.4	1.9	2.1 ^a	2.0 ^a	2.7 ^a	3.7 ^a
Wage and salary	3.3	3.1	2.9	2.8	2.3	2.4	2.6	2.1	2.3 ^a	2.2 ^a	2.9 ^a	3.9 ^a
1954:												
All	4.9	5.8	5.8	5.4	5.1	5.1	5.1	5.0	4.8	4.2	4.5	4.5
Wage and salary	5.3	6.3	6.5	6.1	5.6	5.5	5.4	5.4	5.3	4.7	4.9	4.9

^a Revised to correct for difference between 68-area and 230-area samples.

Note: Unemployment rates are unemployed as a percentage of the civilian labor force, and unemployed whose last job was as a wage or salary worker as a percentage of all wage and salary workers (employed and unemployed).

STATISTICS OF CENSUS BUREAU

TABLE A-10
Unemployed Persons and Selected Groups of Employed Persons, Monthly, 1948-1954
(thousands of persons, 14 years old and over)

MONTH AND YEAR	PERSONS ON TEMPORARY LAYOFF OR WAITING TO START NEW JOB			PARTIALLY EMPLOYED			SUMMARY		
	TOTAL UNEM- PLOYED (1)	Total Layoff (2)	On Tempo- rary Layoff (3)	Waiting to Start New Job (4)	Total (5)	"Economic" Part-time Workers ^a (6)	Involun- tary Part-time Workers ^b (7)	(1)+(2) (8)	(1)+(2)+(5) (9) (10)
1948:									
Jan.	2,065	306	180	126	n.a.	n.a.	n.a.	2,245	2,371
Feb.	2,639	212	129	83	n.a.	n.a.	n.a.	2,768	2,851
Mar.	2,440	236	122	114	1,213	712	511	2,562	2,676
Q. av.	2,382	252	144	108	n.a.	n.a.	n.a.	2,526	2,634
Apr.	2,193	251	146	105	n.a.	n.a.	n.a.	2,339	2,444
May	1,761	267	170	97	n.a.	n.a.	n.a.	1,931	2,028
June	2,184	390	138	252	n.a.	n.a.	n.a.	2,322	2,574
Q. av.	2,046	302	151	151	n.a.	n.a.	n.a.	2,197	2,348
July	2,227	319	163	156	n.a.	n.a.	n.a.	2,390	2,546
Aug.	1,941	337	133	204	n.a.	n.a.	n.a.	2,074	2,278
Sept.	1,899	184	87	97	1,360	814	546	1,986	2,083
Q. av.	2,023	280	128	152	n.a.	n.a.	n.a.	2,151	2,303
Oct.	1,642	126	75	51	n.a.	n.a.	n.a.	1,717	1,768
Nov.	1,831	234	139	95	n.a.	n.a.	n.a.	1,970	2,065
Dec.	1,941	272	207	65	n.a.	n.a.	n.a.	2,148	2,213
Q. av.	1,804	210	140	70	n.a.	n.a.	n.a.	1,944	2,014

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STATISTICS OF CENSUS BUREAU

TABLE A-10 (continued)
(thousands of persons, 14 years old and over)

MONTH AND YEAR	PERSONS ON TEMPORARY LAYOFF OR WAITING TO START NEW JOB				PARTIALLY EMPLOYED				SUMMARY			
	TOTAL UNEM- PLOYED (1)	On Tempo- rary Layoff (3)	Waiting to Start New Job (4)	Total (2)	Total (5)	"Economic"		Involun- tary Part-time Workers ^b (7)	(1) + (3) (8)	(1) + (2) (9)	(1) + (2) + (5) (10)	
						Part-time Workers ^a (6)	Part-time Workers ^b (7)					
1949:												
Jan.	2,664	286	83	369	n.a.	n.a.	n.a.	n.a.	2,950	3,033	n.a.	
Feb.	3,221	168	100	268	n.a.	n.a.	n.a.	n.a.	3,389	3,489	n.a.	
Mar.	3,167	146	83	229	n.a.	n.a.	n.a.	n.a.	3,313	3,396	n.a.	
Q. av.	3,017	200	89	289	n.a.	n.a.	n.a.	n.a.	3,217	3,306	n.a.	
Apr.	3,016	182	87	269	n.a.	n.a.	n.a.	n.a.	3,198	3,285	n.a.	
May	3,289	167	109	276	2,457	1,571	886	n.a.	3,456	3,565	6,022	
June	3,778	143	168	311	n.a.	n.a.	n.a.	n.a.	3,921	4,089	n.a.	
Q. av.	3,361	164	121	285	n.a.	n.a.	n.a.	n.a.	3,525	3,646	n.a.	
July	4,095	292	93	385	n.a.	n.a.	n.a.	n.a.	4,387	4,480	n.a.	
Aug.	3,689	336	209	336	2,555	1,474	1,081	n.a.	3,898	4,025	6,580	
Sept.	3,351	175	126	301	n.a.	n.a.	n.a.	n.a.	3,526	3,652	n.a.	
Q. av.	3,711	225	115	340	n.a.	n.a.	n.a.	n.a.	3,936	4,051	n.a.	
Oct.	3,576	171	76	247	n.a.	n.a.	n.a.	n.a.	3,747	3,823	n.a.	
Nov.	3,409	139	74	213	2,352	1,387	965	n.a.	3,548	3,622	5,974	
Dec.	3,489	144	86	230	n.a.	n.a.	n.a.	n.a.	3,633	3,719	n.a.	
Q. av.	3,491	151	79	230	n.a.	n.a.	n.a.	n.a.	3,642	3,721	n.a.	

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STATISTICS OF CENSUS BUREAU

TABLE A-10 (continued)

MONTH AND YEAR	PERSONS ON TEMPORARY LAYOFF OR WAITING TO START NEW JOB				PARTIALLY EMPLOYED			SUMMARY			
	TOTAL UNEMPLOYED (1)	Total (2)	On Temporary Layoff (3)	Waiting to Start New Job (4)	Total (5)	"Economic" Part-time Workers ^a		Involun- tary Part-time Workers ^b (7)	(1) + (3) (8)	(1) + (2) (9)	(1) + (2) + (5) (10)
						(6)	(7)				
1950:											
Jan.	4,480	219	118	101	n.a.	n.a.	n.a.	n.a.	4,598	4,699	n.a.
Feb.	4,684	144	72	72	2,083	1,095	988	988	4,756	4,828	6,911
Mar.	4,123	219	120	99	n.a.	n.a.	n.a.	n.a.	4,243	4,342	n.a.
Q. av.	4,429	194	103	91	n.a.	n.a.	n.a.	n.a.	4,532	4,623	n.a.
Apr.	3,515	192	86	106	n.a.	n.a.	n.a.	n.a.	3,601	3,707	n.a.
May	3,057	249	110	139	2,155	1,087	1,068	1,068	3,167	3,306	5,461
June	3,384	353	110	243	n.a.	n.a.	n.a.	n.a.	3,494	3,737	n.a.
Q. av.	3,318	265	102	163	n.a.	n.a.	n.a.	n.a.	3,420	3,583	n.a.
July	3,213	268	131	137	n.a.	n.a.	n.a.	n.a.	3,344	3,481	n.a.
Aug.	2,500	171	65	106	2,357	1,245	1,112	1,112	2,565	2,671	5,028
Sept.	2,341	198	63	135	n.a.	n.a.	n.a.	n.a.	2,404	2,539	n.a.
Q. av.	2,684	212	86	126	n.a.	n.a.	n.a.	n.a.	2,770	2,896	n.a.
Oct.	1,940	137	46	91	n.a.	n.a.	n.a.	n.a.	1,986	2,077	n.a.
Nov.	2,240	142	72	70	1,807	986	821	821	2,312	2,382	4,189
Dec.	2,229	209	114	95	n.a.	n.a.	n.a.	n.a.	2,343	2,438	n.a.
Q. av.	2,136	162	77	85	n.a.	n.a.	n.a.	n.a.	2,213	2,298	n.a.

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STATISTICS OF CENSUS BUREAU

TABLE A-10 (continued)
(thousands of persons, 14 years old and over)

MONTH AND YEAR	PERSONS ON TEMPORARY LAYOFF OR WAITING TO START NEW JOB				PARTIALLY EMPLOYED			SUMMARY		
	TOTAL UNEM- PLOYED (1)	On Tempo- rary		Waiting to Start New Job (4)	Total (2)	PARTIALLY EMPLOYED		(1)+(3) (8)	(1)+(2) (9)	(1)+(2)+(5) (10)
		Total Layoff (3)	Employed (3)			Total Workers ^a (5)	"Economic" Part-time Workers ^a (6)			
							Involun- tary Part-time Workers ^b (7)			
1951:										
Jan.	2,503	180	93	87	n.a.	n.a.	n.a.	2,596	2,683	n.a.
Feb.	2,407	165	87	78	1,971	n.a.	848	2,494	2,572	4,543
Mar.	2,147	205	80	125	n.a.	n.a.	n.a.	2,227	2,352	n.a.
Q. av.	2,352	183	87	96	n.a.	n.a.	n.a.	2,439	2,535	n.a.
Apr.	1,744	215	133	82	n.a.	n.a.	n.a.	1,877	1,959	n.a.
May	1,609	203	110	93	1,797	978	819	1,719	1,812	3,609
June	1,980	296	131	165	n.a.	n.a.	n.a.	2,111	2,276	n.a.
Q. av.	1,777	238	125	113	n.a.	n.a.	n.a.	1,902	2,015	n.a.
July	1,856	300	190	110	n.a.	n.a.	n.a.	2,046	2,156	n.a.
Aug.	1,578	258	148	110	n.a.	n.a.	n.a.	1,726	1,836	n.a.
Sept.	1,606	300	156	144	n.a.	n.a.	n.a.	1,762	1,906	n.a.
Q. av.	1,680	286	165	121	n.a.	n.a.	n.a.	1,845	1,966	n.a.
Oct.	1,616	168	104	64	n.a.	n.a.	n.a.	1,720	1,784	n.a.
Nov.	1,828	196	78	118	n.a.	n.a.	n.a.	1,906	2,024	n.a.
Dec.	1,674	156	98	58	n.a.	n.a.	n.a.	1,772	1,830	n.a.
Q. av.	1,706	173	93	80	n.a.	n.a.	n.a.	1,799	1,879	n.a.

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STATISTICS OF CENSUS BUREAU

TABLE A-10 (continued)
(thousands of persons, 14 years old and over)

MONTH AND YEAR	PERSONS ON TEMPORARY LAYOFF OR WAITING			PARTIALLY EMPLOYED				SUMMARY		
	TO START NEW JOB			"Economic"		Involun- tary		(1)+(2) (9)	(1)+(2) (10)	(1)+(2)+(5) (11)
	TOTAL UNEMPLOYED (1)	Total Layoff (2)	On Tempo- rary Layoff (3)	Waiting to Start New Job (4)	Total (5)	Part-time Workers ^a (6)	Part-time Workers ^b (7)			
1952:										
Jan.	2,054	224	142	82	n.a.	n.a.	n.a.	2,196	2,278	n.a.
Feb.	2,086	272	154	118	n.a.	n.a.	n.a.	2,240	2,358	n.a.
Mar.	1,804	234	142	92	n.a.	n.a.	n.a.	1,946	2,038	n.a.
Q. av.	1,981	243	146	97	n.a.	n.a.	n.a.	2,127	2,224	n.a.
Apr.	1,612	258	188	70	n.a.	n.a.	n.a.	1,800	1,870	n.a.
May	1,602	238	142	96	1,722	1,014	708	1,744	1,840	3,562
June	1,818	340	174	166	n.a.	n.a.	n.a.	1,992	2,158	n.a.
Q. av.	1,677	279	168	111	n.a.	n.a.	n.a.	1,845	1,956	n.a.
July	1,942	262	150	112	n.a.	n.a.	n.a.	2,092	2,204	n.a.
Aug.	1,604	370	230	140	n.a.	n.a.	n.a.	1,834	1,974	n.a.
Sept.	1,438	336	94	242	n.a.	n.a.	n.a.	1,532	1,774	n.a.
Q. av.	1,661	323	158	165	n.a.	n.a.	n.a.	1,819	1,984	n.a.
Oct.	1,284	220	92	128	n.a.	n.a.	n.a.	1,376	1,504	n.a.
Nov.	1,418	198	98	100	1,398	826	572	1,516	1,616	3,014
Dec.	1,412	152	94	58	n.a.	n.a.	n.a.	1,506	1,564	n.a.
Q. av.	1,371	190	95	95	n.a.	n.a.	n.a.	1,466	1,561	n.a.

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STATISTICS OF CENSUS BUREAU

TABLE A-10 (continued)
(thousands of persons, 14 years old and over)

MONTH AND YEAR	PERSONS ON TEMPORARY LAYOFF OR WAITING TO START NEW JOB			PARTIALLY EMPLOYED				SUMMARY		
	TOTAL UNEM- PLOYED (1)	On Tempo- rary Layoff (3)		Total (5)	"Economic" Part-time Workers ^a (6)		Involun- tary Part-time Workers ^b (7)	(1)+(3) (8)	(1)+(2) (9)	(1)+(2)+(5) (10)
		Total (2)	Waiting to Start New Job (4)							
1953:										
Jan.	1,892	274	194	80	n.a.	n.a.	n.a.	2,086	2,166	n.a.
Feb.	1,788	198	110	88	n.a.	n.a.	n.a.	1,898	1,986	n.a.
Mar.	1,674	176	84	92	n.a.	n.a.	n.a.	1,758	1,850	n.a.
Q. av.	1,785	216	129	87	n.a.	n.a.	n.a.	1,914	2,001	n.a.
Apr.	1,582	204	100	104	n.a.	n.a.	n.a.	1,682	1,786	n.a.
May	1,306	264	126	138	1,386 ^c	811 ^c	575 ^c	1,432	1,570	2,956 ^c
June	1,562	270	122	148	n.a.	n.a.	n.a.	1,684	1,832	n.a.
Q. av.	1,483	246	116	130	n.a.	n.a.	n.a.	1,599	1,729	n.a.
July	1,548	222	144	78	n.a.	n.a.	n.a.	1,692	1,770	n.a.
Aug.	1,240	302	170	132	n.a.	n.a.	n.a.	1,410	1,542	n.a.
Sept. ^d	1,321	313	172	141	n.a.	n.a.	n.a.	1,493	1,634	n.a.
Q. av.	1,370	279	162	117	n.a.	n.a.	n.a.	1,532	1,649	n.a.
Oct. ^d	1,301	282	193	89	n.a.	n.a.	n.a.	1,494	1,583	n.a.
Nov. ^d	1,699	346	273	73	n.a.	n.a.	n.a.	1,972	2,045	n.a.
Dec. ^d	2,313	363	316	47	2,240	1,680	560	2,629	2,676	4,916
Q. av.	1,771	331	261	70	n.a.	n.a.	n.a.	2,032	2,102	n.a.

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STATISTICS OF CENSUS BUREAU

TABLE A-10 (continued)
(thousands of persons, 14 years old and over)

MONTH AND YEAR	PERSONS ON TEMPORARY LAYOFF OR WAITING TO START NEW JOB			PARTIALLY EMPLOYED			SUMMARY		
	TOTAL UNEM- PLOYED (1)	On Tempo- rary Layoff (3)		Total (5)	"Economic" Part-time Workers ^a (6)		Involun- tary Part-time Workers ^b (7)	(1) + (3) (8)	(1) + (2) (9)
		Total (2)	Waiting to Start New Job (4)						
1954:									
Jan.	3,087	507	427	80	n.a.	n.a.	n.a.	3,514	3,594
Feb.	3,671	324	216	108	n.a.	n.a.	n.a.	3,887	3,995
Mar.	3,725	328	236	92	2,756	1,878	878	3,961	4,053
Q. av.	3,494	386	293	93	n.a.	n.a.	n.a.	3,787	3,880
Apr.	3,465	404	216	188	n.a.	n.a.	n.a.	3,681	3,869
May	3,305	385	294	91	2,592	1,644	948	3,599	3,690
June	3,347	456	229	227	n.a.	n.a.	n.a.	3,576	3,803
Q. av.	3,372	415	246	169	n.a.	n.a.	n.a.	3,618	3,787
July	3,346	436	298	138	n.a.	n.a.	n.a.	3,644	3,782
Aug.	3,245	294	143	151	3,047	1,861	1,186	3,388	3,539
Sept.	3,099	364	198	166	n.a.	n.a.	n.a.	3,297	3,463
Q. av.	3,230	365	213	152	n.a.	n.a.	n.a.	3,443	3,595
Oct.	2,741	222	136	86	n.a.	n.a.	n.a.	2,877	2,963
Nov.	2,893	253	120	133	2,579	1,506	1,073	3,013	3,146
Dec.	2,838	201	137	64	n.a.	n.a.	n.a.	2,975	3,039
Q. av.	2,824	225	131	94	n.a.	n.a.	n.a.	2,955	3,049

^a Regular full-time workers working part time because of economic factors (slack work, job turnover, material shortages, and repairs to plant or equipment).

^b Regular part-time workers who prefer and could accept full-time work.

^c Estimated by applying distribution of part-time workers by type in each hours-worked category in November 1952 to hours-worked categories for May 1953.

^d Revised to correct for differences between 68-area and 230-area samples.

n.a. = not available since not collected in this survey.

STATISTICS OF CENSUS BUREAU

TABLE A-11

Unemployed Persons and Partially Employed Persons in Non-Agricultural Industries, Selected Months, 1949-1954
(thousands of persons, 14 years old and over)

MONTH AND YEAR	TOTAL UNEMPLOYED	PARTIALLY EMPLOYED	
		"Economic" Part-time Workers ^a	Involuntary Part-time Workers ^b
1949:			
May	3,289	1,530	786
August	3,689	1,191	952
November	3,409	1,244	865
1950:			
February	4,684	993	908
May	3,057	1,034	965
August	2,500	916	981
November	2,240	855	754
1951:			
February	2,407	1,033	806
May	1,609	918	694
1952:			
May	1,602	958	642
November	1,418	704	493
1953:			
December ^c	2,313	1,376	510
1954:			
March	3,725	1,712	794
May	3,305	1,547	866
August	3,245	1,451	1,059
November	2,893	1,285	935

^a Regular full-time workers working part time because of economic factors (slack work, job turnover, material shortages, and repairs to plant or equipment).

^b Regular part-time workers who prefer and could accept full-time work.

^c Revised to correct for differences between 68-area and 230-area samples.

STATISTICS OF CENSUS BUREAU

TABLE A-12

Comparison of Number of Persons Affected and Man-Hours Lost by Unemployment, Partial Employment, Temporary Layoffs, and "New Jobs," Selected Months, 1949-1954
(thousands of persons, 14 years old and over)

MONTH AND YEAR	TOTAL UNEMPLOYMENT		UNEMPLOYMENT, PARTIAL EMPLOYMENT, TEMPORARY LAYOFFS, AND "NEW JOBS"		MAN-HOURS LOST BY UNEMPLOYMENT, PARTIAL EMPLOYMENT, TEMPORARY LAYOFFS, AND "NEW JOBS"	
	Number	Per Cent of Labor Force	Number	Per Cent of Labor Force	Number	Per Cent of Time Worked Plus Time Lost
1949:						
May	3,289	5.3	6,022	9.7	195,618	7.3
August	3,689	5.8	6,580	10.3	220,887	8.4
November	3,409	5.4	5,974	9.5	195,863	7.4
1950:						
February	4,684	7.6	6,911	11.2	241,144	9.6
May	3,057	4.9	5,461	8.7	179,777	6.8
August	2,500	3.9	5,028	7.8	159,760	6.0
November	2,240	3.5	4,189	6.6	136,030	5.1
1951:						
February	2,407	3.9	4,543	7.4	142,968	5.8
May	1,609	2.6	3,609	5.7	110,501	4.1
1952:						
May	1,602	2.6	3,562	5.7	108,392	4.1
November	1,418	2.2	3,014	4.7	93,421	3.5
1953:						
May ^a	1,306	2.1	2,956	4.7	91,213	3.5
December ^b	2,313	3.7	4,916	7.8	150,762	5.8
1954:						
March	3,725	5.8	6,809	10.7	214,936	8.3
May	3,305	5.1	6,282	9.8	197,290	7.4
August	3,245	5.0	6,586	10.0	203,898	7.9
November	2,893	4.5	5,725	8.9	176,901	6.7

^a Part-time workers estimated from November 1952 data.

^b Revised to correct for difference between 68-area and 230-area samples.

STATISTICS OF CENSUS BUREAU

C O M M E N T S

NATHAN KEYFITZ, Dominion Bureau of Statistics, Canada

THE Canadian and United States labor force surveys have had somewhat parallel histories. The United States survey started in 1940, the Canadian in 1945. A game of leap frog has been played between the two surveys so far as technique is concerned, now one being ahead on some aspect, now the other, though at every stage Canadian progress has depended on our contacts with the Bureau of the Census. A year before our survey began Herbert Marshall and I visited the Bureau of the Census and Morris Hansen and his co-workers told us not only what they had done in creating the Current Population Survey but also what they would do if they were starting all over again. Some ten years before they were able to change their own survey, they suspected that the optimum number of areas within which the 25,000 households of the survey should be selected was more than the sixty-eight then in use. We accordingly started with 100 and have been slowly increasing the number since. We agreed also, ten years ago, that the completeness and accuracy of enumeration might be controlled without having a permanent office in each primary sampling unit, and Canada started with only six regional offices. The United States has adapted its organization to fewer offices this year, but because they did it more recently they have taken more care for the problem of control. However we are not quite sure either in Canada or the United States just what the most effective and economical method of enumeration control is; experiments are going on in both countries but more actively in the United States.

On the side of mechanics, the Canadian survey changed to mark-sense in the field early in 1951 and was followed in this by the United States survey. There is no question that speed, accuracy, and economy are gained through the use of a document that can be marked in the field. But no one contends that the method now being used in Canada and the United States is the last word, and the United States is actively searching for cheaper and more convenient methods.

A major difference in the mechanics of the two operations is the use of UNIVAC in the United States survey, IBM equipment in the Canadian. UNIVAC not only calculates survey results according to the original method of inflating the sample but also inflates by another method, comparing identical households of the given and the preceding month. Furthermore UNIVAC has enough electronic hardware to make variance calculations more frequently and on more realistic models than we can afford in Canada.

STATISTICS OF CENSUS BUREAU

But perhaps of more interest to this group than enumeration and mechanical resemblances and differences between the United States and Canadian surveys are the concepts enumerated and estimated. First a semantic difference: the use of the term "unemployed" is prominent in your publications but not to be seen in the Canadian ones—or at least not in connection with any specific figure. In an attempt to get our public to see that there were different sorts of unemployed people we have issued figures of a number of categories, of which one is the "without a job and seeking work" during the reference week. There are signs that we are making progress towards convincing the public that different and equally legitimate points of view will require different combinations of categories for measurement. At the same time misunderstanding of the problem of measurement in public discussion remains a problem in Canada as in the United States.

Perhaps the matter of definition can be discussed in terms of a continuum, not the continuum of degrees of unemployment that has been referred to by other speakers but a continuum of precision in the specification of unemployment. At one extreme, as the sharpest possible definition, we might confine the series to family heads between twenty-five and sixty-four years of age who are wage and salary earners and so avoid all the difficulties of defining unemployment for persons who have been retired involuntarily, for housewives, for secondary workers of all sorts. On the other hand the total that one really wishes for purposes of analysis (whether the welfare of individuals or the productive labor supply of the community is concerned) is a broader group, in fact the whole adult population.

There is another dimension of sharpness, if we define sharpness to mean reproducibility of results. We could retain all age and sex groups but drop out of the unemployed those who would be looking for work except that they are sick or because they think that no work is available and confine the count of unemployed to active work seekers. Something of this kind is Miss Bancroft's suggestion, and this way of sharpening the result, even though it does make some sacrifice of categories which theory would urge us to include, is in line with the aim of statisticians in this field to avoid surveying intentions.

Ease of counting cannot be a decisive argument for choosing among concepts of unemployment. It is in some respects simplest to confine the count to persons without a job and seeking work all week, the "totally unemployed." If, however, the response of employers to a falling off in demand is to put their employees on short time, the number of totally unemployed will have diminishing significance. Miss Bancroft's aim is to secure the maximum inclusiveness consistent with

STATISTICS OF CENSUS BUREAU

a fairly high degree of reproducibility, and her proposals deserve our most careful consideration.

ROBERT W. BURGESS, Bureau of the Census

According to my point of view, the aim of the government statistician in analyzing employment and unemployment is to help everyone to understand these phenomena for all significant applications. I recognize the importance of such analysis in formulating and effectuating anti-cyclical measures but do not believe we should limit examination of certain aspects of unemployment, partial employment, or per capita productivity and income because they may not bear on such anti-cyclical thinking.

A major gain from such analysis would be improvement of basic concepts and working definitions. I am allergic to suggestions that we fall back on the broad and somewhat vague ideas appropriate to the pre-1940 data. I think we should give careful and sympathetic consideration to concepts like the secondary labor force, total potential labor supply, partial unemployment, and several others that have been mentioned.

Gertrude Bancroft has been with the Bureau of the Census since October 1943. During her service she has been chief of the unit and later the section which has had the major responsibility for directing the Current Population Survey. More recently she has been individually most concerned with reviewing the checks and recommendations connected with the recent critical study by the Secretary's Special Advisory Committee on Employment Statistics.

It may be noted that Miss Bancroft includes in her paper the usual and orthodox disclaimers that she is not presenting the official view of the Department of Commerce or the Census Bureau. While these statements are, of course, technically correct and are appropriate to insure that the paper and the remarks made to this audience reflect the speaker's own judgment, it should also be noted that Miss Bancroft's comments and recommendations are always given most serious consideration in the formulation of official Census Bureau policy.